

Zusätzliche Informationen zur Dissertation von Yvonne Gäßler, 2007

**Tabelle 7-26: Liste von Genen, deren Expression durch Pep13-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus               | AGI Code  | Accession-nummer | Protein/Mögliche Funktion  |
|---------|------------|----------------|--------------------------|-----------|------------------|--|
| PC253-1 | 277        | 46/65          | Paracoccus denitrificans |           | ZP_00630616      | conserved hypothetical protein (see 664-2-3)   |
| PC253-2 | 283        | 18/21          | Arabidopsis thaliana     | At5g47570 | NP_568684        | unknown protein  |
| PC253-3 | 283        | 18/21          | Arabidopsis thaliana     | At5g47570 | NP_568684        | unknown protein  |
| PC253-4 | 283        | 18/21          | Arabidopsis thaliana     | At5g47570 | NP_568684        | unknown protein  |
| PC265-1 | 287        | 20/39          | Arabidopsis thaliana     | At4g39830 | NP_195693        | copper ion binding   |
| PC265-2 | 277        | 19/22          | Arabidopsis thaliana     | At4g19640 | NP_193699        | ARA7   |
| PC265-3 | 290        | 32/33          | Arabidopsis thaliana     | At2g18740 | NP_179464        | unknown protein  |
| PC265-4 | 273        | 13/26          | Arabidopsis thaliana     | At4g22030 | NP_193934        | F-box protein family (see 347-2)   |
| PC271-1 | 274        | 79/90          | Arabidopsis thaliana     | At1g48900 | NP_564535        | 7S RNA binding / nucleotide bindingsignal recognition particle 54KD protein 2 (SRP54)              |
| PC271-2 | 260        |                |                          |           |                  | no significant similarity found  |
| PC271-3 | 22         |                |                          |           |                  | no significant similarity found  |
| PC271-4 | 282        |                |                          |           |                  | no significant similarity found  |
| PC274-1 | 82         |                |                          |           |                  | no significant similarity found  |
| PC274-2 | 82         |                |                          |           |                  | no significant similarity found  |
| PC274-3 | 82         |                |                          |           |                  | no significant similarity found  |
| PC274-4 | 82         |                |                          |           |                  | no significant similarity found  |
| PC280-1 | 281        | 86/93          | Arabidopsis thaliana     | At2g46020 | NP_182126        | ATP binding / ATP-dependent helicase/ DNA binding / nucleic acid binding / transcription regulator |
| PC280-2 | 280        | 87/93          | Arabidopsis thaliana     | At2g46020 | NP_182126        | ATP binding / ATP-dependent helicase/ DNA binding / nucleic acid binding / transcription regulator |
| PC280-3 | 212        | 70/70          | Petroselinum crispum     |           | AAA33861         | Tyr-DC (Eli 5) (see 312-1)   |
| PC280-4 | 282        | 18/51          | Arabidopsis thaliana     | At5g23570 | NP_197747        | SGS3 (SUPPRESSOR OF GENE SILENCING 3) (see 178-2)  |
| PC282-1 | 71         | 21/23          | Daucus carota            |           | AAA98926         | secreted glycoprotein EP4, 47K, precursor  |
| PC282-4 | 71         | 21/23          | Daucus carota            |           | AAA98926         | secreted glycoprotein EP4, 47K, precursor  |
| PC282-3 | 69         | 21/22          | Arabidopsis thaliana     | At4g11860 | NP_567383        | unknown protein  |
| PC287-1 | 325        |                |                          |           |                  | no significant similarity found  |
| PC287-2 | 312        |                |                          |           |                  | no significant similarity found  |
| PC287-3 | 211        | 29/59          | Daucus carota            |           | BAB68539         | (S)-reticuline oxidase-like protein (see 397-1)  |
| PC287-4 | 303        | 65/87          | Petroselinum crispum     |           | AF239832         | Eli7.7 (see 197-4)   |
| PC290-1 | 127        |                |                          |           |                  | no significant similarity found  |

|           |     |         |                       |           |           |  |
|-----------|-----|---------|-----------------------|-----------|-----------|--|
| PC290-2   | 128 | 30/40   | Arabidopsis thaliana  | At3g17700 | NP_566585 | CNBT1 (CYCLIC NUCLEOTIDE-BINDING TRANSPORTER 1) (see285-2)   |
| PC290-3   | 128 | 30/40   | Arabidopsis thaliana  | At3g17700 | NP_566585 | CNBT1 (CYCLIC NUCLEOTIDE-BINDING TRANSPORTER 1) (see285-2)   |
| PC290-4   | 124 | 14/14   | Petroselinum crispum  |           | AAG09294  | unknown  |
| PC299-1   | 289 | 58/62   | Ammi majus            |           | AAR24096  | bergaptol O-methyltransferase                                |
| PC299-2   | 283 | 70/71   | Arabidopsis thaliana  | At5g09810 | NP_196543 | ACT7   |
| PC299-3   | 238 |         |                       |           |           | no significant similarity found                              |
| PC303-1   | 147 | 36/47   | Arabidopsis thaliana  | At1g19300 | NP_564077 | Avr9/Cf-9 rapidly elicited protein 231 (see 315)             |
| PC303-2   | 144 | 26/46   | Petunia x hybrida     |           | BAC53892  | cytochrome P450  |
| PC303-4   | 144 | 26/46   | Petunia x hybrida     |           | BAC53892  | cytochrome P450  |
| PC303-3   | 134 | 32/43   | Picea mariana         |           | AAC32151  | probable 60S ribosomal protein L27a                          |
| PC313-1   | 213 | 24/31   | Arabidopsis thaliana  | At2g42350 | NP_181764 | protein binding / ubiquitin-protein ligase/ zinc ion binding |
| PC313-2   | 212 | 29/61   | Arabidopsis thaliana  | At2g42350 | NP_181764 | protein binding / ubiquitin-protein ligase/ zinc ion binding |
| PC313-3   | 212 | 29/61   | Arabidopsis thaliana  | At2g42350 | NP_181764 | protein binding / ubiquitin-protein ligase/ zinc ion binding |
| PC313-4   | 213 | 24/31   | Arabidopsis thaliana  | At2g42350 | NP_181764 | protein binding / ubiquitin-protein ligase/ zinc ion binding |
| PC314-1   | 129 |         |                       |           |           | no significant similarity found                              |
| PC314-2   | 179 | 59/59   | Petroselinum crispum  |           | AAG23926  | Eli 7.5 (see 352-3)  |
| PC314-3   | 177 |         |                       |           |           | no significant similarity found                              |
| PC316-1   | 112 |         |                       |           |           | no significant similarity found                              |
| PC316-2   | 114 |         |                       |           |           | no significant similarity found                              |
| PC316-3   | 112 |         |                       |           |           | no significant similarity found                              |
| PC316-4   | 112 |         |                       |           |           | no significant similarity found                              |
| PC320-2   | 16  |         |                       |           |           | no significant similarity found                              |
| PC320-4   | 16  |         |                       |           |           | no significant similarity found                              |
| PC320-3   | 135 | 17/43   | Arabidopsis thaliana  | At5g23570 | NP_197747 | SGS3 (SUPPRESSOR OF GENE SILENCING 3) (see 178-2)            |
| PC362-1   | 358 | 28/39   | Arabidopsis thaliana  | At1g22360 | NP_173653 | AT2 (see 489-1)  |
| PC362-2   | 177 | 23/47   | Arabidopsis thaliana  | At4g15610 | NP_567472 | unknown protein  |
| PC362-3   | 90  | 22/29   | Arabidopsis thaliana  | At5g67250 | NP_569047 | SKIP2 (SKP1 INTERACTING PARTNER 2)                           |
| PC362-4   | 315 |         |                       |           |           | no significant similarity found                              |
| PC363-2   | 227 | 14/36   | Rattus norvegicus     |           | CAF33425  | similar to SCO-spondin                                       |
| PC363-3   | 227 | 14/36   | Rattus norvegicus     |           | CAF33425  | similar to SCO-spondin                                       |
| PC405-1-1 | 387 | 121/128 | Arabidopsis thaliana  | At5g56030 | NP_200414 | HSP81-2  |
| PC405-2-1 | 552 | 22/25   | Oryza sativa          |           | NP_910689 | hypothetical protein predicted by FGENESH etc.               |
| PC405-2-2 | 421 | 56/76   | Arabidopsis thaliana  | At4g33850 | NP_194116 | catalytic  |
| PC405-2-3 | 361 | 40/97   | Lotus japonicus       |           | AAC62626  | rac GTPase activating protein 3 (see 406)                    |
| PC405-2-4 | 128 | 38/42   | Matricaria chamomilla |           | BAA87068  | ethylene-responsive element binding protein 1 homolog        |
| PC406-1   | 361 | 40/97   | Lotus japonicus       |           | AAC62626  | rac GTPase activating protein 3 (see 405-2-3)                |

|         |     |       |                      |           |           |   |
|---------|-----|-------|----------------------|-----------|-----------|---|
| PC406-3 | 361 | 42/97 | Lotus japonicus      |           | AAC62626  | rac GTPase activating protein 3 (see 405-2-3)   |
| PC406-4 | 360 | 41/86 | Lotus japonicus      |           | AAC62626  | rac GTPase activating protein 3 (see 405-2-3)   |
| PC406-2 | 397 |       |                      |           |           | no significant similarity found   |
| PC407-1 | 118 | 38/39 | Arabidopsis thaliana | At1g24180 | NP_173828 | IAR4  |
| PC407-2 | 119 | 29/30 | Arabidopsis thaliana | At1g24180 | NP_173828 | IAR4  |
| PC407-3 | 118 | 38/39 | Arabidopsis thaliana | At1g24180 | NP_173828 | IAR4  |
| PC423-1 | 37  |       |                      |           |           | no significant similarity found   |
| PC423-3 | 53  |       |                      |           |           | no significant similarity found   |
| PC424-1 | 53  |       |                      |           |           | no significant similarity found   |
| PC424-2 | 76  |       |                      |           |           | no significant similarity found   |
| PC424-3 | 75  |       |                      |           |           | no significant similarity found   |
| PC424-4 | 75  |       |                      |           |           | no significant similarity found   |
| PC425-1 | 45  |       |                      |           |           | no significant similarity found   |
| PC425-2 | 36  |       |                      |           |           | no significant similarity found   |
| PC425-4 | 32  |       |                      |           |           | no significant similarity found   |
| PC426-1 | 37  |       |                      |           |           | no significant similarity found   |
| PC426-2 | 28  |       |                      |           |           | no significant similarity found   |
| PC426-3 | 48  |       |                      |           |           | no significant similarity found   |
| PC426-4 | 44  |       |                      |           |           | no significant similarity found   |
| PC428-2 | 65  |       |                      |           |           | no significant similarity found   |
| PC428-3 | 65  |       |                      |           |           | no significant similarity found   |
| PC429-2 | 53  |       |                      |           |           | no significant similarity found   |
| PC429-3 | 52  |       |                      |           |           | no significant similarity found   |
| PC429-4 | 52  |       |                      |           |           | no significant similarity found   |
| PC430-2 | 53  |       |                      |           |           | no significant similarity found (see 429-2)   |
| PC430-4 | 43  |       |                      |           |           | no significant similarity found   |
| PC434-1 | 59  |       |                      |           |           | no significant similarity found   |
| PC434-2 | 80  | 16/27 | Arabidopsis thaliana | At3g28580 | NP_189499 | ATP binding / ATPase/ nucleoside-triphosphatase/ nucleotide binding                                   |
| PC434-3 | 103 |       |                      |           |           | no significant similarity found   |
| PC434-4 | 107 | 17/33 | Arabidopsis thaliana | At5g44800 | NP_199293 | ATP-dependent helicase/ chromatin binding / nucleic acid binding / protein binding / zinc ion binding |
| PC435-1 | 76  | 15/18 | Arabidopsis thaliana | At1g15380 | NP_563973 | lactoylglutathione lyase  |
| PC435-2 | 87  |       |                      |           |           | no significant similarity found   |
| PC435-3 | 73  |       |                      |           |           | no significant similarity found   |
| PC435-4 | 76  | 15/18 | Arabidopsis thaliana | At1g15380 | NP_563973 | lactoylglutathione lyase  |
| PC437-1 | 48  |       |                      |           |           | no significant similarity found   |
| PC437-3 | 40  |       |                      |           |           | no significant similarity found   |

|           |     |       |                      |           |           |   |
|-----------|-----|-------|----------------------|-----------|-----------|---|
| PC437-4   | 49  |       |                      |           |           | no significant similarity found             |
| PC462-1   | 119 | 26/38 | Oryza sativa         |           | AAG13620  | putative glutamyl-tRNA reductase            |
| PC462-2   | 127 |       |                      |           |           | no significant similarity found             |
| PC464-1   | 67  | 17/21 | Panax ginseng        |           | BAD15331  | cytochrome P450                             |
| PC464-2   | 67  | 17/21 | Panax ginseng        |           | BAD15331  | cytochrome P450                             |
| PC464-3   | 67  | 17/21 | Panax ginseng        |           | BAD15331  | cytochrome P450                             |
| PC464-4   | 67  | 17/21 | Panax ginseng        |           | BAD15331  | cytochrome P450                             |
| PC471-1   | 155 | 37/49 | Arabidopsis thaliana | At3g52450 | NP_190813 | ubiquitin-protein ligase                    |
| PC471-2   | 154 | 33/44 | Malus x domestica    |           | AAF34134  | high molecular weight heat shock protein    |
| PC471-3   | 191 | 31/61 | Arabidopsis thaliana | At2g46150 | NP_182138 | unknown protein (see 470)                   |
| PC471-4   | 156 | 37/47 | Arabidopsis thaliana | At3g52450 | NP_190813 | ubiquitin-protein ligase                    |
| PC481-1   | 45  |       |                      |           |           | no significant similarity found             |
| PC481-2   | 396 | 59/92 | Daucus carota        |           | BAA03413  | EDGP precursor (see 763-4)                  |
| PC481-3   | 259 | 68/85 | Catharanthus roseus  |           | AAB05871  | PAPS-reductase-like protein (see 651-2)     |
| PC481-4   | 440 | 59/93 | Daucus carota        |           | BAA03413  | EDGP precursor (see 763-4)                  |
| PC485-1   | 93  | 16/26 | Arabidopsis thaliana | At5g43190 | NP_568622 | ubiquitin-protein ligase                    |
| PC485-2   | 133 | 21/21 | Arabidopsis thaliana | At1g23290 | NP_173743 | RPL27A (RIBOSOMAL PROTEIN L27A)             |
| PC485-3   | 130 | 15/42 | Nicotiana tabacum    |           | AAD47832  | cytochrome P450 (see PC674-4)               |
| PC485-4   | 130 |       |                      |           |           | no significant similarity found             |
| PC499-1   | 94  | 27/31 | Solanum tuberosum    |           | CAA81749  | 1-aminocyclopropane-1-carboxylate synthase  |
| PC499-2   | 94  | 27/31 | Solanum tuberosum    |           | CAA81749  | 1-aminocyclopropane-1-carboxylate synthase  |
| PC499-3   | 94  | 27/31 | Solanum tuberosum    |           | CAA81749  | 1-aminocyclopropane-1-carboxylate synthase  |
| PC499-4   | 94  | 27/31 | Solanum tuberosum    |           | CAA81749  | 1-aminocyclopropane-1-carboxylate synthase  |
| PC502-1   | 175 | 39/58 | Arabidopsis thaliana | At4g34150 | NP_567956 | rhodopsin-like receptor                     |
| PC502-2   | 169 | 43/52 | Arabidopsis thaliana | At1g13290 | NP_172787 | transcription factor                        |
| PC502-3   | 168 | 28/60 | Arabidopsis thaliana | At3g55980 | NP_567030 | transcription factor (see 503-1)            |
| PC509-1   | 81  |       |                      |           |           | no significant similarity found             |
| PC509-2   | 87  | 24/28 | Arabidopsis thaliana | At1g57720 | NP_176084 | translation elongation factor (see 533-2-3) |
| PC509-3   | 87  | 24/28 | Arabidopsis thaliana | At1g57720 | NP_176084 | translation elongation factor (see 533-2-3) |
| PC509-4   | 97  |       |                      |           |           | no significant similarity found             |
| PC513-1   | 287 | 17/40 | Arabidopsis thaliana | At2g42760 | NP_181804 | unknown protein                             |
| PC513-2   | 282 | 13/24 | Arabidopsis thaliana | At2g42760 | NP_181804 | unknown protein                             |
| PC513-3   | 287 | 17/40 | Arabidopsis thaliana | At2g42760 | NP_181804 | unknown protein                             |
| PC513-4   | 286 | 28/55 | Arabidopsis thaliana | At2g42760 | NP_181804 | unknown protein                             |
| PC522-1-1 | 195 | 36/49 | Nicotiana tabacum    |           | AAF98369  | patatin-like protein 3 (see 399)            |
| PC522-1-2 | 191 | 36/49 | Nicotiana tabacum    |           | AAF98369  | patatin-like protein 3 (see 399)            |

|           |     |       |                      |           |           |   |
|-----------|-----|-------|----------------------|-----------|-----------|---|
| PC522-1-3 | 193 | 47/61 | Nicotiana tabacum    |           | AAF98369  | patatin-like protein 3 (see 399)<br>no significant similarity found |
| PC522-1-4 | 95  |       |                      |           |           |   |
| PC522-2-1 | 100 | 13/18 | Arabidopsis thaliana | At1g45688 | NP_564495 | unknown protein   |
| PC522-2-2 | 99  | 15/30 | Arabidopsis thaliana | At1g45688 | NP_564495 | unknown protein (see 520-3)   |
| PC524-1   | 127 | 21/36 | Arabidopsis thaliana | At5g64750 | NP_201280 | DNA binding / transcription factor (see 505-2)                      |
| PC524-3   | 128 |       |                      |           |           | no significant similarity found                                     |
| PC524-4   | 125 | 19/32 | Verbascum thapsus    |           | AAL08686  | ADH2 (see 525-1)  |
| PC526-1   | 91  | 23/29 | Arabidopsis thaliana | At5g51950 | NP_200008 | FAD binding / aldehyde-lyase/ oxidoreductase (see 523-4)            |
| PC526-2   | 76  |       |                      |           |           | no significant similarity found                                     |
| PC526-4   | 81  |       |                      |           |           | no significant similarity found                                     |
| PC528-1   | 164 | 32/54 | Arabidopsis thaliana | At5g52510 | NP_200064 | transcription factor  |
| PC528-2   | 163 | 32/54 | Arabidopsis thaliana | At5g52510 | NP_200064 | transcription factor  |
| PC528-3   | 163 | 32/54 | Arabidopsis thaliana | At5g52510 | NP_200064 | transcription factor  |
| PC528-4   | 164 | 32/54 | Arabidopsis thaliana | At5g52510 | NP_200064 | transcription factor  |
| PC533-1-1 | 139 | 22/46 | Arabidopsis thaliana | At2g36090 | NP_181153 | unknown protein (see 532-1-4)                                       |
| PC533-1-2 | 139 | 14/25 | Arabidopsis thaliana | At2g36090 | NP_181153 | unknown protein (see 532-1-4)                                       |
| PC533-1-3 | 138 | 14/25 | Arabidopsis thaliana | At2g36090 | NP_181153 | unknown protein (see 532-1-4)                                       |
| PC533-1-4 | 137 | 14/25 | Arabidopsis thaliana | At2g36090 | NP_181153 | unknown protein (see 532-1-4)                                       |
| PC533-2-1 | 91  |       |                      |           |           | no significant similarity found                                     |
| PC533-2-2 | 91  |       |                      |           |           | no significant similarity found                                     |
| PC533-2-3 | 87  | 24/28 | Arabidopsis thaliana | At1g57720 | NP_176084 | translation elongation factor (see 509-2)                           |
| PC533-2-4 | 71  | 21/23 | Calamus usitatus     |           | AAB17255  | alcohol dehydrogenase   |
| PC543-1   | 165 | 16/36 | Arabidopsis thaliana | At5g44360 | NP_199249 | electron carrier/ oxidoreductase                                    |
| PC543-2   | 91  |       |                      |           |           | no significant similarity found                                     |
| PC543-3   | 93  |       |                      |           |           | no significant similarity found                                     |
| PC552-1   | 175 | 40/55 | Arabidopsis thaliana | At1g20780 | NP_564125 | ubiquitin-protein ligase  |
| PC552-3   | 175 | 40/55 | Arabidopsis thaliana | At1g20780 | NP_564125 | ubiquitin-protein ligase  |
| PC552-4   | 175 | 40/55 | Arabidopsis thaliana | At1g20780 | NP_564125 | ubiquitin-protein ligase  |
| PC552-2   | 136 | 18/23 | Arabidopsis thaliana | At4g23430 | NP_567681 | oxidoreductase  |
| PC554-2   | 161 | 47/53 | Arabidopsis thaliana | At3g25800 | NP_189208 | PDF1  |
| PC559-1   | -   |       |                      |           |           | no significant similarity found                                     |
| PC559-4   | -   |       |                      |           |           | no significant similarity found                                     |
| PC598-1   | 144 | 43/47 | Arabidopsis thaliana | At1g12470 | NP_172709 | ubiquitin-protein ligase/ zinc ion binding                          |
| PC598-2   | 134 |       |                      |           |           | no significant similarity found                                     |
| PC598-4   | 153 | 27/35 | Arabidopsis thaliana | At4g04470 | NP_192356 | peroxisomal membrane protein 22 kDa (PMP22)                         |
| PC599-1   | 54  |       |                      |           |           | no significant similarity found                                     |

|         |     |        |                           |           |           |   |
|---------|-----|--------|---------------------------|-----------|-----------|---|
| PC599-2 | 54  |        |                           |           |           | no significant similarity found                                   |
| PC599-4 | 54  |        |                           |           |           | no significant similarity found                                   |
| PC614-1 | 186 | 23/69  | Prunus mume               |           | BAC66626  | F-box   |
| PC614-2 | 153 | 22/47  | Daucus carota             |           | AAB50843  | elicitor induced glycoprotein iEP4                                |
| PC614-3 | 153 | 23/47  | Daucus carota             |           | AAB50843  | elicitor induced glycoprotein iEP4                                |
| PC614-4 | 153 | 38/50  | Arabidopsis thaliana      | At1g58250 | NP_176121 | SAB (SABRE)   |
| PC620-1 | 306 | 32/78  | Nicotiana tabacum         |           | AAP03884  | ACRE 74 (U-box, homologous to PC CMPG1) (see 618-2-1)             |
| PC620-2 | 304 | 39/80  | Nicotiana tabacum         |           | AAP03884  | ACRE 74 (U-box, homologous to PC CMPG1) (see 618-2-1)             |
| PC620-3 | 305 | 47/105 | Nicotiana tabacum         |           | AAP03884  | ACRE 74 (U-box, homologous to PC CMPG1) (see 618-2-1)             |
| PC620-4 | 304 | 39/78  | Nicotiana tabacum         |           | AAP03884  | ACRE 74 (U-box, homologous to PC CMPG1) (see 618-2-1)             |
| PC632-1 | 207 | 24/64  | Arabidopsis thaliana      | At1g28040 | NP_174125 | protein binding / ubiquitin-protein ligase/ zinc ion binding      |
| PC632-2 | 206 | 41/65  | Oryza sativa              |           | XP_473162 | OSJNBa0004N05.26  |
| PC632-3 | 207 | 56/59  | Petroselinum crispum      |           | CAA31086  | Pathogenesis-related protein A (PR1-1)                            |
| PC632-4 | 206 | 41/65  | Oryza sativa              |           | XP_473162 | OSJNBa0004N05.26  |
| PC666-1 | 239 |        |                           |           |           | no significant similarity found                                   |
| PC666-2 | 239 | 13/14  | Corynebacterium efficiens |           | NP_738153 | conserved hypothetical protein (ähnlich 664-1-1) (see 738)        |
| PC666-3 | 236 |        |                           |           |           | no significant similarity found (BUT no taq)                      |
| PC666-4 | 220 | 60/78  | Linum usitatissimum       |           | AAB02926  | peroxidase (see 722-2)  |
| PC668-1 | 155 | 29/38  | Gossypium hirsutum        |           | AAL93154  | bacterial-induced class III peroxidase (see 691-1-4)              |
| PC668-2 | 172 |        |                           |           |           | no significant similarity found                                   |
| PC668-3 | 165 |        |                           |           |           | no significant similarity found                                   |
| PC668-4 | 175 | 20/32  | Cucumis sativus           |           | CAB76364  | matrix metalloproteinase  |
| PC676-1 | 156 | 29/31  | Petroselinum crispum      |           | Q06086    | Tyr-DC 2  |
| PC676-2 | 156 | 30/31  | Petroselinum crispum      |           | Q06086    | Tyr-DC 2  |
| PC676-3 | 157 | 51/51  | Petroselinum crispum      |           | Q06086    | Tyr-DC 2  |
| PC676-4 | 156 | 30/31  | Petroselinum crispum      |           | Q06086    | Tyr-DC 2  |
| PC680-1 | 201 |        |                           |           |           | no significant similarity found                                   |
| PC680-2 | 201 |        |                           |           |           | no significant similarity found                                   |
| PC680-3 | 201 |        |                           |           |           | no significant similarity found                                   |
| PC680-4 | 201 |        |                           |           |           | no significant similarity found                                   |
| PC711-4 | 150 | 27/45  | Nicotiana tabacum         |           | BAB16427  | NtEIG-E80 (elicitor inducible gene product)                       |
| PC712-1 | 103 | 16/22  | Nicotiana tabacum         |           | BAD06582  | PERK1-like protein kinase (proline extensin-like receptor kinase) |
| PC712-2 | 103 | 14/19  | Nicotiana tabacum         |           | BAD06582  | PERK1-like protein kinase (proline extensin-like receptor kinase) |
| PC722-1 | 202 | 47/55  | Linum usitatissimum       |           | AAB02926  | peroxidase (see 672-3)  |
| PC722-2 | 201 | 57/66  | Linum usitatissimum       |           | AAB02926  | peroxidase (see 672-3)  |
| PC722-3 | 201 | 56/66  | Linum usitatissimum       |           | AAB02926  | peroxidase (see 672-3)  |

|         |     |       |                      |           |           |   |
|---------|-----|-------|----------------------|-----------|-----------|---|
| PC722-4 | 202 | 27/54 | Nicotiana tabacum    |           | AAD47832  | cytochrome P450 (see 326-3) or P450 monooxygenase [Artemisia annua, ABG49365] |
| PC766-1 | 157 | 18/49 | Arabidopsis thaliana | At4g04480 | NP_192357 | unknown protein (see 476-1)   |
| PC771-1 | 90  | 23/29 | Arabidopsis thaliana | At3g62980 | NP_567135 | transport inhibitor response 1 (TIR1), AtFBL1                                 |
| PC771-2 | 90  | 23/29 | Arabidopsis thaliana | At3g62980 | NP_567135 | transport inhibitor response 1 (TIR1), AtFBL2                                 |
| PC771-4 | 94  |       |                      |           |           | no significant similarity found   |
| PC772-1 | 80  |       |                      |           |           | no significant similarity found   |
| PC772-4 | 80  |       |                      |           |           | no significant similarity found   |
| PC772-2 | 80  |       |                      |           |           | no significant similarity found   |
| PC772-3 | 87  |       |                      |           |           | no significant similarity found   |
| PC782-1 | 76  |       |                      |           |           | no significant similarity found   |
| PC782-2 | 76  |       |                      |           |           | no significant similarity found   |
| PC782-3 | 76  |       |                      |           |           | no significant similarity found   |
| PC782-4 | 76  | 13/20 | Arabidopsis thaliana | At4g11410 | NP_192880 | oxidoreductase (see 770-2)  |
| PC828-1 | 228 |       |                      |           |           | no significant similarity found   |
| PC828-4 | 224 | 49/74 | Oryza sativa         |           | AAM97165  | putative oxysterol binding protein  |

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**Tabelle 7-27: Liste von Genen, deren Expression durch HrpZ<sub>Pspk</sub>-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus           | AGI Code  | Accession nummer | Protein/Mögliche Funktion   |
|---------|------------|----------------|----------------------|-----------|------------------|---|
| PC792-1 | 248        |                |                      |           |                  | no significant similarity found   |
| PC792-2 | 243        | 23/62          | Arabidopsis thaliana | At4g27290 | NP_194459        | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding |
| PC792-3 | 247        |                |                      |           |                  | no significant similarity found   |
| PC792-4 | 74         |                |                      |           |                  | no significant similarity found   |

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**Tabelle 7-28: Liste von Genen, deren Expression durch NLP<sub>Pp</sub>-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus                | AGI Code  | Accession-nummer | Protein/Mögliche Funktion                                    |
|---------|------------|----------------|---------------------------|-----------|------------------|--|
| PC438-2 | 25         |                |                           |           |                  | no significant similarity found                              |
| PC438-3 | 24         |                |                           |           |                  | no significant similarity found                              |
| PC438-4 | 23         |                |                           |           |                  | no significant similarity found                              |
| PC588-1 | 438        | 66/76          | Solanum tuberosum         |           | AAL07488         | G protein beta subunit 2                                     |
| PC588-2 | 438        | 66/76          | Solanum tuberosum         |           | AAL07488         | G protein beta subunit 2                                     |
| PC588-3 | 446        | 143/148        | Apium graveolens          |           | CAA73139         | isocitrate dehydrogenase (NADP+)                             |
| PC588-4 | 450        | 54/104         |                           | At1g73950 | NP_177535        | protein binding / ubiquitin-protein ligase/ zinc ion binding |
| PC695-1 | 134        | 17/37          | Oryza sativa              |           | AAK54302         | putative helicase  |
| PC695-2 | 36         |                |                           |           |                  | no significant similarity found                              |
| PC695-4 | 160        | 28/42          | Ehrlichia canis str. Jake |           | ZP_00211102      | hypothetical protein Ecan 02000441                           |

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**Tabelle 7-29: Liste von Genen, deren Expression durch LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus               | AGI Code  | Accession-nummer | Protein/Mögliche Funktion                    |
|---------|------------|----------------|--------------------------|-----------|------------------|--|
| PC268-1 | 235        |                |                          |           |                  | no significant similarity found (BUT no apo) |
| PC268-2 | 165        | 16/27          |                          | At5g44400 | NP_199253        | electron carrier (see 718-4) (BUT no taq)    |
| PC268-3 | 140        | 21/36          |                          | At1g44170 | NP_175081        | ALDH3H1; aldehyde dehydrogenase              |
| PC340-3 | 640 ?      | 15/28          |                          | At5g06370 | NP_568167        | unknown protein (see 630-1-1)                |
| PC353-1 | 102        | 22/33          | Medicago truncatula      |           | ABE88701         | Esterase/lipase/thioesterase (see 358-3)     |
| PC353-2 | 102        | 22/33          | Medicago truncatula      |           | ABE88701         | Esterase/lipase/thioesterase (see 358-3)     |
| PC353-3 | 102        | 22/33          | Medicago truncatula      |           | ABE88701         | Esterase/lipase/thioesterase (see 358-3)     |
| PC353-4 | 102        | 22/33          | Medicago truncatula      |           | ABE88701         | Esterase/lipase/thioesterase (see 358-3)     |
| PC436-4 | 311        | 72/82          | Oryza sativa             |           | AAN08216         | ribosomal protein L15                        |
| PC445-1 | 46         | 12/14          | Oryza sativa             |           | NP_914653        | germin (oxalate oxidase)-like protein        |
| PC445-2 | 103        | 25/33          |                          | At5g03455 | NP_568119        | CDC25  |
| PC445-3 | 147        |                |                          |           |                  | no significant similarity found              |
| PC445-4 | 166        | 43/55          |                          | At1g65960 | NP_176771        | GAD2 (GLUTAMATE DECARBOXYLASE 2) (see 256-3) |
| PC446-2 | 46         | 12/14          | Oryza sativa             |           | AAC04834         | germin-like protein 3 (see 448-2)            |
| PC446-3 | 44         | 12/14          | Oryza sativa             |           | AAC04834         | germin-like protein 3 (see 448-2)            |
| PC446-4 | 67         | 15/18          | Malus x domestica        |           | BAC20170         | spermidine synthase (see 279-1)              |
| PC450-2 | 115        | 25/37          |                          | At3g12610 | NP_187867        | DRT100 (DNA-DAMAGE REPAIR/TOLERATION 100)    |
| PC450-3 | 115        | 25/37          |                          | At3g12610 | NP_187867        | DRT100 (DNA-DAMAGE REPAIR/TOLERATION 100)    |
| PC450-4 | 115        | 25/37          |                          | At3g12610 | NP_187867        | DRT100 (DNA-DAMAGE REPAIR/TOLERATION 100)    |
| PC747-1 | 418        | 51/135         | Dictyostelium discoideum |           | AAD50375         | Cyclophilin D                                |
| PC747-2 | 431        | 26/78          | Aquifex aeolicus         |           | NP_213502        | cytochrome c-type biogenesis protein         |
| PC747-3 | 411        | 19/25          | Oryza sativa             |           | AAO23085         | putative LRR protein                         |
| PC747-4 | 65         | 19/20          |                          | At5g04230 | NP_196043        | PAL3 (PHENYL ALANINE AMMONIA-LYASE 3)        |
| PC757-4 | 80         |                |                          |           |                  | no significant similarity found              |

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**Tabelle 7-30: Liste von Genen, deren Expression durch Pep13- und HrpZ<sub>Psp</sub>-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus                   | AGI Code   | Accession-nummer | Protein/Mögliche Funktion                       |
|---------|------------|----------------|------------------------------|------------|------------------|---|
| PC258-1 | 281        | 39/59          | Arabidopsis thaliana         | A t3g25250 | NP_189162        | AGC2-1 (OXIDATIVE SIGNAL-INDUCIBLE1)            |
| PC258-2 | 212        | 70/70          | Petroselinum crispum         |            | AAA33861         | Tyr-DC (Eli 5) (see 312-1)                      |
| PC258-3 | 52         |                |                              |            |                  | no significant similarity found                 |
| PC275-1 | 281        | 18/65          | Plasmodium chabaudi chabaudi |            | XP_745411        | hypothetical protein                            |
| PC275-2 | 276        | 38/44          | Daucus carota                |            | BAA99575         | DC2.15 like protein                             |
| PC275-3 | 276        | 38/44          | Daucus carota                |            | BAA99575         | DC2.15 like protein                             |
| PC279-1 | 54         | 14/17          | Malus x domestica            |            | BAC20170         | spermidine synthase (see 446-4)                 |
| PC279-3 | 65         |                |                              |            |                  | no significant similarity found                 |
| PC279-4 | 56         |                |                              |            |                  | no significant similarity found                 |
| PC331-1 | 143        |                |                              |            |                  | no significant similarity found                 |
| PC331-2 | 142        |                |                              |            |                  | no significant similarity found                 |
| PC331-3 | 141        |                |                              |            |                  | no significant similarity found                 |
| PC331-4 | 144        |                |                              |            |                  | no significant similarity found                 |
| PC345-1 | 141        | 15/21          | Arabidopsis thaliana         | A t4g14440 | NP_193180        | carnitine racemase/ catalytic                   |
| PC345-2 | 154        |                |                              |            |                  | no significant similarity found                 |
| PC345-4 | 108        | 12/22          | Arabidopsis thaliana         | A t1g28220 | NP_174143        | ATPUP3 (see 180-2)                              |
| PC392-1 | 220        |                |                              |            |                  | no significant similarity found                 |
| PC392-3 | 142        |                |                              |            |                  | no significant similarity found                 |
| PC392-4 | 141        | 33/47          | Arabidopsis thaliana         |            | CAB75469         | copia-type reverse transcriptase-like protein   |
| PC397-1 | 122        | 22/32          | Daucus carota                |            | BAB68539         | (S)-reticuline oxidase-like protein (see 748-2) |
| PC397-3 | 122        | 22/32          | Daucus carota                |            | BAB68539         | (S)-reticuline oxidase-like protein (see 748-2) |
| PC397-2 | 125        | 28/35          | Arabidopsis thaliana         | A t2g30440 | AAB63091         | putative signal peptidase I                     |
| PC397-4 | 125        | 28/35          | Arabidopsis thaliana         | A t2g30440 | AAB63091         | putative signal peptidase I                     |
| PC398-1 | 103        |                |                              |            |                  | no significant similarity found                 |
| PC398-2 | 103        |                |                              |            |                  | no significant similarity found                 |
| PC398-4 | 103        |                |                              |            |                  | no significant similarity found                 |
| PC402-1 | 308        | 15/16          | Petroselinum crispum         |            | AAB47235         | Pathogenesis-related protein                    |

|         |      |        |                      |            |           |  |
|---------|------|--------|----------------------|------------|-----------|--|
| PC402-2 | 312  | 58/61  |                      | A t1g04480 | NP_563707 | structural constituent of ribosome                                   |
| PC402-3 | 320  | 53/76  | Solanum tuberosum    |            | CAJ77506  | putative peroxidase  |
| PC402-4 | 314  | 45/100 | Arabidopsis thaliana | A t5g55060 | NP_200317 | unknown protein  |
| PC404-1 | 65   | 15/19  | Arabidopsis thaliana | A t3g55840 | NP_191143 | unknown  |
| PC404-4 | 69   |        |                      |            |           | no significant similarity found                                      |
| PC404-2 | 75   |        |                      |            |           | no significant similarity found                                      |
| PC404-3 | 76   |        |                      |            |           | no significant similarity found                                      |
| PC448-1 | 44   | 12/14  | Oryza sativa         |            | AAC04834  | germin-like protein 3 (see 446-2)                                    |
| PC448-2 | 44   | 12/14  | Oryza sativa         |            | AAC04834  | germin-like protein 3 (see 446-2)                                    |
| PC448-4 | 46   | 12/14  | Oryza sativa         |            | AAC04834  | germin-like protein 3 (see 446-2)                                    |
| PC460-1 | 162  | 18/24  | Arabidopsis thaliana | A t2g46150 | NP_182138 | unknown protein (see 470-1)  |
| PC460-2 | 166  | 34/39  | Arabidopsis thaliana | A t3g23540 | NP_188996 | catalytic  |
| PC460-3 | <193 | 11/17  | Arabidopsis thaliana | A t1g14990 | NP_172952 | unknown protein  |
| PC460-4 | 166  | 20/45  | Nicotiana tabacum    |            | AAD47832  | cytochrome P450 (see 326-3)  |
| PC497-1 | 130  | 21/42  | Arabidopsis thaliana | A t3g54440 | NP_680128 | beta-galactosidase/ hydrolase, hydrolyzing O-glycosyl compounds      |
| PC497-2 | 130  | 21/42  | Arabidopsis thaliana | A t3g54440 | NP_680128 | beta-galactosidase/ hydrolase, hydrolyzing O-glycosyl compounds      |
| PC497-3 | 131  | 21/42  | Arabidopsis thaliana | A t3g54440 | NP_680128 | beta-galactosidase/ hydrolase, hydrolyzing O-glycosyl compounds      |
| PC497-4 | 129  | 21/42  | Arabidopsis thaliana | A t3g54440 | NP_680128 | beta-galactosidase/ hydrolase, hydrolyzing O-glycosyl compounds      |
| PC500-1 | 92   | 15/30  | Oryza sativa         |            | AAT38097  | putative pectinesterase  |
| PC500-2 | 100  | 28/33  | Arabidopsis thaliana | A t4g13350 | NP_193071 | unknown protein  |
| PC500-3 | 100  | 28/33  | Arabidopsis thaliana | A t4g13350 | NP_193071 | unknown protein  |
| PC500-4 | 73   | 20/21  | Arabidopsis thaliana | A t3g27380 | NP_189374 | SDH2-1   |
| PC514-1 | 228  | 57/58  | Arabidopsis thaliana | A t4g18710 | NP_193606 | BIN2 (BRASSINOSTEROID-INSENSITIVE 2)                                 |
| PC514-2 | 217  | 21/34  | Arabidopsis thaliana | A t1g74790 | NP_177617 | unknown protein  |
| PC514-3 | 243  | 18/20  | Petroselinum crispum |            | AAK69402  | immediate-early fungal elicitor protein CMPG1, Eli17 (see 334-4)     |
| PC514-4 | 160  |        |                      |            |           | no significant similarity found                                      |
| PC515-1 | 167  | 30/44  | Arabidopsis thaliana | A t5g38200 | NP_568556 | unknown protein  |
| PC515-3 | 170  | 31/47  | Arabidopsis thaliana | A t5g38200 | NP_568556 | unknown protein  |
| PC515-2 | 162  | 18/30  | Arabidopsis thaliana | A t2g47680 | NP_182290 | ATP binding / ATP-dependent helicase/ helicase/ nucleic acid binding |
| PC538-1 | 156  |        |                      |            |           | no significant similarity found                                      |
| PC538-3 | 153  | 22/29  | Arabidopsis thaliana | A t5g41330 | NP_198949 | protein binding / voltage-gated potassium channel                    |
| PC538-4 | 153  | 22/29  | Arabidopsis thaliana | A t5g41330 | NP_198949 | protein binding / voltage-gated potassium channel                    |
| PC540-1 | 125  |        |                      |            |           | no significant similarity found                                      |
| PC540-2 | 125  |        |                      |            |           | no significant similarity found                                      |
| PC540-3 | 125  |        |                      |            |           | no significant similarity found                                      |
| PC540-4 | 154  |        |                      |            |           | no significant similarity found                                      |

|         |     |       |                      |            |           |   |
|---------|-----|-------|----------------------|------------|-----------|---|
| PC558-1 | 123 |       |                      |            |           | no significant similarity found   |
| PC558-4 | 139 |       |                      |            |           | no significant similarity found   |
| PC602-1 | 176 | 27/62 | Arabidopsis thaliana | A t4g14746 | NP_680687 | unknown protein   |
| PC602-2 | 176 | 27/62 | Arabidopsis thaliana | A t4g14746 | NP_680687 | unknown protein   |
| PC602-3 | 175 | 21/23 | Beta vulgaris        |            | CAC80990  | dihydroorotate (see 377-1)  |
| PC602-4 | 176 | 26/62 | Arabidopsis thaliana | A t4g14746 | NP_680687 | unknown protein   |
| PC603-1 | 85  |       |                      |            |           | no significant similarity found   |
| PC603-2 | 153 |       |                      |            |           | no significant similarity found   |
| PC603-3 | 153 | 36/51 | Nicotiana tabacum    |            | BAD07483  | pleiotropic drug resistance (PDR)-type ABC transporter (see 523-3)                    |
| PC603-4 | 153 |       |                      |            |           | no significant similarity found   |
| PC604-1 | 140 | 19/36 | Solanum tuberosum    |            | AAK84008  | beta-amylase PCT-BMYI (see 786-2)   |
| PC604-2 | 138 | 24/37 | Oryza sativa         |            | BAD01246  | putative MtN19 (see 628-4)  |
| PC604-3 | 138 |       |                      |            |           | no significant similarity found   |
| PC604-4 | 136 |       |                      |            |           | no significant similarity found   |
| PC615-1 | 165 |       |                      |            |           | no significant similarity found   |
| PC615-3 | 165 |       |                      |            |           | no significant similarity found   |
| PC615-4 | 165 |       |                      |            |           | no significant similarity found   |
| PC617-1 | 94  | 24/30 | Arabidopsis thaliana | A t1g13270 | NP_172785 | MAP1C (METHIONINE AMINOPEPTIDASE 1B)  |
| PC617-2 | 94  | 23/30 | Arabidopsis thaliana | A t1g13270 | NP_172785 | MAP1C (METHIONINE AMINOPEPTIDASE 1B)  |
| PC617-3 | 94  | 22/31 | Medicago truncatula  |            | ABE77847  | putative polyprotein-related  |
| PC617-4 | 96  |       |                      |            |           | no significant similarity found   |
| PC629-1 | 162 | 39/54 | Arabidopsis thaliana | A t1g74360 | NP_565084 | ATP binding / protein kinase/ protein serine/threonine kinase/protein-tyrosine kinase |
| PC629-2 | 61  |       |                      |            |           | no significant similarity found   |
| PC629-3 | 162 | 39/54 | Arabidopsis thaliana | A t1g74360 | NP_565084 | ATP binding / protein kinase/ protein serine/threonine kinase/protein-tyrosine kinase |
| PC629-4 | 128 | 15/34 | Arabidopsis thaliana | A t4g13770 | NP_193113 | CYP83A1 (CYTOCHROME P450 83A1); oxygen binding  |
| PC643-1 | 227 | 22/31 | Nicotiana tabacum    |            | CAA58859  | lipoxygenase (EC 1.13.11.12) (BUT 2x apo)   |
| PC643-2 | 149 | 32/43 | Nicotiana tabacum    |            | CAA58859  | lipoxygenase (EC 1.13.11.12)  |
| PC643-3 | 129 | 39/39 | Petroselinum crispum |            | AAD55974  | WRKY1   |
| PC643-4 | 143 |       |                      |            |           | no significant similarity found   |
| PC651-1 | 253 | 56/81 | Arabidopsis thaliana | A t4g30010 | NP_194730 | unknown protein (see 625-2)   |
| PC651-2 | 254 | 43/70 | Catharanthus roseus  |            | AAB05871  | PAPS-reductase-like protein (see 481-3)   |
| PC651-3 | 252 | 63/70 | Oryza sativa         |            | NP_921996 | cytoplasmic malate dehydrogenase (see 790-2)  |
| PC651-4 | 254 | 50/71 | Arabidopsis thaliana | A t5g13500 | NP_196854 | unknown protein   |
| PC655-1 | 73  |       |                      |            |           | no significant similarity found   |
| PC655-2 | 72  |       |                      |            |           | no significant similarity found   |
| PC655-3 | 76  |       |                      |            |           | no significant similarity found   |

|           |     |         |                      |            |           |  |
|-----------|-----|---------|----------------------|------------|-----------|--|
| PC655-4   | 72  |         |                      |            |           | no significant similarity found  |
| PC675-1   | 194 | 36/48   | Arabidopsis thaliana | A t3g57120 | NP_191271 | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase       |
| PC675-2   | 195 | 36/48   | Arabidopsis thaliana | A t3g57120 | NP_191271 | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase       |
| PC675-3   | 197 | 36/57   | Medicago truncatula  |            | ABE85589  | Zinc finger, RING-type; Thioredoxin-related  |
| PC675-4   | 197 | 36/57   | Medicago truncatula  |            | ABE85589  | Zinc finger, RING-type; Thioredoxin-related  |
| PC761-1-1 | 34  |         |                      |            |           | no significant similarity found  |
| PC761-1-2 | 314 | 102/104 | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC761-1-3 | 314 | 102/104 | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC761-1-4 | 314 | 102/104 | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC761-2-1 | 314 | 101/104 | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC761-2-2 | 315 | 75/76   | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC761-2-3 | 314 | 101/104 | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC761-2-4 | 314 | 98/104  | Daucus carota        |            | BAD24818  | cell attachment protein in somatic embryogenesis (see 758-2)   |
| PC763-1   | 228 | 61/75   | Arabidopsis thaliana | A t2g31960 | NP_850178 | ATGSL03 (GLUCAN SYNTHASE-LIKE 3); 1,3-beta-glucan synthase/transferase, transferring glycosyl groups |
| PC763-3   | 228 | 54/74   | Arabidopsis thaliana | A t4g28570 | NP_194586 | electron carrier   |
| PC763-4   | 229 | 46/49   | Daucus carota        |            | BAA03413  | EDGP precursor (see 808-4)   |
| PC794-1   | 224 | 31/47   | Arabidopsis thaliana | A t1g13570 | NP_172814 | unknown protein  |
| PC794-2   | 227 | 47/74   | Arabidopsis thaliana | A t1g14550 | NP_172907 | peroxidase   |
| PC794-3   | 226 | 35/58   | Arabidopsis thaliana | A t1g14550 | NP_172907 | peroxidase   |

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**Tabelle 7-31: Liste von Genen, deren Expression durch Pep13- und NLP<sub>Pp</sub>-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge<br>[bp] | BlastX<br>[AS/AS] | Organismus           | AGI Code  | Accession-<br>nummer | Protein/Mögliche Funktion                                   |
|---------|---------------|-------------------|----------------------|-----------|----------------------|---|
| PC690-1 | 198           | 33/33             | Petroselinum crispum |           | CAA34715             | Phenylalanine ammonia-lyase 1 (see 240-2)                   |
| PC690-2 | 210           | 26/38             | Petroselinum crispum |           | AAA33861             | Tyr-DC (see 312-1)  |
| PC690-3 | 237           | 36/78             | Arabidopsis thaliana | At2g03890 | NP_565307            | inositol or phosphatidylinositol kinase/ phosphotransferase |
| PC690-4 | 201           | 57/66             | Linum usitatissimum  |           | AAB02926             | peroxidase (see 672-3)                                      |
| PC727-1 | 185           |                   |                      |           |                      | no significant similarity found                             |
| PC727-3 | 89            |                   |                      |           |                      | no significant similarity found                             |
| PC727-4 | 109           | 17/20             | Medicago sativa      |           | T09535               | dnaK-type molecular chaperone hsp70 (see 177-2)             |

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**Tabelle 7-32: Liste von Genen, deren Expression durch Pep13- und LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon      | Länge [bp] | BlastX [AS/AS] | Organismus           | AGI Code  | Accession-nummer | Protein/Mögliche Funktion   |
|-----------|------------|----------------|----------------------|-----------|------------------|---|
| PC251-1   | 281        | 48/94          | Daucus carota        |           | BAB68539         | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC251-2   | 281        | 48/94          | Daucus carota        |           | BAB68539         | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC251-4   | 289        | 18/47          | Arabidopsis thaliana | AT1G26420 | NP_173966        | electron carrier (see 397-1)  |
| PC292-1   | 80         |                |                      |           |                  | no significant similarity found   |
| PC308-1   | 166        | 14/21          | Arabidopsis thaliana | AT5G43580 | NP_199171        | serine-type endopeptidase inhibitor (see 266-3)   |
| PC308-2   | 171        | 29/55          | Medicago truncatula  |           | ABE88160         | hAT family dimerisation domain, putative  |
| PC308-3   | 172        | 32/59          | Medicago truncatula  |           | ABE88160         | hAT family dimerisation domain, putative  |
| PC308-4   | 172        | 32/59          | Medicago truncatula  |           | ABE88160         | hAT family dimerisation domain, putative  |
| PC359-1   | 71         | 20/23          | Arabidopsis thaliana | At4g27290 | NP_194459        | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding |
| PC359-2   | 213        | 54/71          | Brassica oleracea    |           | AAL60580         | senescence-associated cysteine protease   |
| PC359-3   | 213        | 56/71          | Brassica oleracea    |           | AAL60580         | senescence-associated cysteine protease   |
| PC359-4   | 214        | 53/70          | Arabidopsis thaliana | At2g17480 | NP_565416        | MLO8  |
| PC760-1-1 | 314        | 102/104        | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |
| PC760-1-2 | 314        | 101/104        | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |
| PC760-1-3 | 314        | 98/104         | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |
| PC760-1-4 | 261        | 38/80          | Daucus carota        |           | BAB68539         | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC760-2-1 | 314        | 101/104        | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |
| PC760-2-2 | 314        | 100/104        | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |
| PC760-2-3 | 314        | 101/104        | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |
| PC760-2-4 | 314        | 101/104        | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 758-2)  |

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**Tabelle 7-33: Liste von Genen, deren Expression durch NLP<sub>Pp</sub>- und LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus                  | AGI Code  | Accession-nummer | Protein/Mögliche Funktion                      |
|---------|------------|----------------|-----------------------------|-----------|------------------|--|
| PC327-1 | 44         |                |                             |           |                  | no significant similarity found                |
| PC327-3 | 44         |                |                             |           |                  | no significant similarity found                |
| PC327-4 | 50         |                |                             |           |                  | no significant similarity found                |
| PC361-1 | 408        | 119/135        | Arabidopsis thaliana        | At1g29880 | NP_564337        | ATP binding / glycine-tRNA ligase/ tRNA ligase |
| PC361-2 | 408        | 87/138         | Arabidopsis thaliana        | At1g29880 | NP_564337        | ATP binding / glycine-tRNA ligase/ tRNA ligase |
| PC361-3 | 407        | 118/135        | Arabidopsis thaliana        | At1g29880 | NP_564337        | ATP binding / glycine-tRNA ligase/ tRNA ligase |
| PC364-2 | 209        | 34/39          | Daucus carota               |           | BAD04048         | pathogenesis-related protein-like protein 2    |
| PC364-3 | 158        | 26/52          | Arabidopsis thaliana        | At1g30760 | NP_174363        | electron carrier (see255-2-2)                  |
| PC365-1 | 256        | 74/85          | Arabidopsis thaliana        | At2g32980 | NP_565760        | unknown protein                                |
| PC369-1 | 209        | 14/44          | Caulobacter crescentus      |           | NP_419575        | DNA-binding response regulator, LuxR family    |
| PC369-2 | 244        | 67/80          | Arabidopsis thaliana        | At4g31700 | NP_194898        | RPS6 (RIBOSOMAL PROTEIN S6) (see 368-2-1)      |
| PC369-3 | 244        | 67/80          | Arabidopsis thaliana        | At4g31700 | NP_194898        | RPS6 (RIBOSOMAL PROTEIN S6) (see 380-2)        |
| PC369-4 | 244        | 34/41          | Brassica rapa               |           | BAA11393         | putative ribosomal protein                     |
| PC487-2 | 89         |                |                             |           |                  | no significant similarity found                |
| PC557-1 | 229        |                |                             |           |                  | no significant similarity found                |
| PC557-2 | 81         | 20/26          | Arabidopsis thaliana        | At3g46430 | NP_190227        | expressed protein (see 796-3)                  |
| PC557-3 | 368        | 33/36          | Petroselinum crispum        |           | AAA98491         | anionic peroxidase (see 113-2)                 |
| PC557-4 | 62         |                |                             |           |                  | no significant similarity found                |
| PC560-2 | 269        | 21/33          | Arabidopsis thaliana        | At5g35160 | NP_198366        | transporter                                    |
| PC560-3 | -          |                |                             |           |                  | no significant similarity found                |
| PC583-1 | 323        | 20/21          | Arabidopsis thaliana        | At5g17020 | NP_197204        | XPO1A  |
| PC583-2 | 323        |                |                             |           |                  | no significant similarity found                |
| PC583-3 | 114        |                |                             |           |                  | no significant similarity found                |
| PC583-4 | 198        | 22/65          | Rhynchosporus sp. ATCC50230 |           | AAQ24864         | heat shock protein 70                          |
| PC589-1 | 385        | 35/54          | Arabidopsis thaliana        | At2g46225 | NP_566067        | ABI1L1   |
| PC589-2 | 233        | 27/41          | Glycine max                 |           | BAA77676         | acitic chitinase                               |
| PC589-4 | 381        | 31/31          | Petroselinum crispum        |           | AAA98491         | peroxidase precursor (see 113-2)               |

|         |      |         |                           |           |           |  |
|---------|------|---------|---------------------------|-----------|-----------|--|
| PC593-2 | 388  | 21/46   | Medicago truncatula       |           | ABE81132  | probable transposase - soybean transposon mariner element Soymar1                              |
| PC593-3 | 385  | 25/74   | Medicago truncatula       |           | ABE81132  | probable transposase - soybean transposon mariner element Soymar1                              |
| PC593-4 | 390  | 85/107  | Arabidopsis thaliana      | At1g08450 | NP_563816 | CRT3 (CALRETICULIN 3)  |
| PC594-1 | 249  | 16/37   | Homo sapiens              |           | AAQ88908  | ERHC3048   |
| PC594-2 | 250  | 17/40   | Chlamydomonas reinhardtii |           | AAL14119  | gamete-specific homeodomain protein (see 595-1)  |
| PC594-3 | 249  | 16/37   | Homo sapiens              |           | AAQ88908  | ERHC3048   |
| PC594-4 | 340  |         |                           |           |           | no significant similarity found  |
| PC657-1 | 301  |         |                           |           |           | no significant similarity found  |
| PC657-2 | 301  |         |                           |           |           | no significant similarity found  |
| PC657-3 | 301  |         |                           |           |           | no significant similarity found  |
| PC657-4 | 346  |         |                           |           |           | no significant similarity found  |
| PC661-1 | 359  | 13/41   | Oryza sativa              |           | XP_474384 | OSJNBb0017I01.25   |
| PC661-2 | 354  | 34/53   | Arabidopsis thaliana      | At4g27300 | NP_194460 | ATP binding / carbohydrate binding / kinase/ protein kinase (see 219-3. similar to 654)        |
| PC661-3 | 187  | 55/61   | Petroselinum crispum      |           | AAA98491  | anionic peroxidase (see 113-2)   |
| PC661-4 | 358  | 49/56   | Nicotiana plumbaginifolia |           | CAA69600  | NADH glutamate dehydrogenase   |
| PC778-1 | 309  | 34/51   | Medicago truncatula       |           | ABE81354  | Tyrosine protein kinase, active site   |
| PC778-2 | 309  | 35/51   | Medicago truncatula       |           | ABE81354  | Tyrosine protein kinase, active site   |
| PC778-4 | 309  | 35/51   | Medicago truncatula       |           | ABE81354  | Tyrosine protein kinase, active site   |
| PC778-3 | <349 | 42/74   | Arabidopsis thaliana      | At5g64400 | NP_201245 | unknown protein  |
| PC780-1 | 131  | 17/38   | Oryza sativa              |           | NP_918208 | hypothetical protein   |
| PC780-3 | 131  | 17/38   | Oryza sativa              |           | NP_918208 | hypothetical protein   |
| PC780-4 | 131  | 16/38   | Oryza sativa              |           | NP_918208 | hypothetical protein   |
| PC780-2 | 129  |         |                           |           |           | no significant similarity found  |
| PC797-1 | 412  | 96/136  | Arabidopsis thaliana      | At3g10660 | NP_187677 | CPK2 (CALMODULIN-DOMAIN PROTEIN KINASE CDPK ISOFORM 2)   |
| PC797-2 | 408  | 60/82   | Arabidopsis thaliana      | At2g38110 | NP_181346 | ATGPAT6/GPAT6; 1-acylglycerol-3-phosphate O-acyltransferase/ acyltransferase (see 195-1)       |
| PC797-3 | 412  | 103/136 | Arabidopsis thaliana      | At3g10660 | NP_187677 | CPK2 (CALMODULIN-DOMAIN PROTEIN KINASE CDPK ISOFORM 2)   |
| PC812-1 | 358  | 27/75   | Quercus suber             |           | CAC87937  | PD1-like protein   |
| PC812-2 | 346  | 29/38   | Nicotiana tabacum         |           | BAB92011  | pleiotropic drug resistance (PDR) like protein (see 523-3)                                     |
| PC812-3 | 350  | 47/69   | Solanum tuberosum         |           | AAP84703  | putative xyloglucanase inhibitor (see 786-1)   |
| PC812-4 | 356  | 84/118  | Solanum tuberosum         |           | AAP84703  | putative xyloglucanase inhibitor (see 786-1)   |
| PC813-1 | 316  | 29/45   | Arabidopsis thaliana      | At3g15395 | NP_974322 | unknown protein  |
| PC813-2 | 317  | 28/35   | Arabidopsis thaliana      | At1g50200 | NP_175439 | ALATS (ALANYL-TRNA SYNTHETASE); ATP binding / alanine-tRNA ligase/ nucleic acid binding        |
| PC822-1 | 555  | 87/187  | Nicotiana benthamiana     |           | ABC61504  | AGO4-1 (see 823-4)   |
| PC822-2 | 555  | 85/125  | Nicotiana benthamiana     |           | ABC61504  | AGO4-1 (see 823-4)   |
| PC822-3 | 566  | 133/145 | Arabidopsis thaliana      | At5g01850 | NP_195805 | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase |
| PC822-4 | 564  | 126/136 | Arabidopsis thaliana      | At5g01850 | NP_195805 | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase |
| PC823-3 | 555  | 126/180 | Nicotiana benthamiana     |           | ABC61505  | AGO4-2 or AGO4-1   |
| PC823-4 | 554  | 76/115  | Nicotiana benthamiana     |           | ABC61504  | AGO4-1   |

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**Tabelle 7-34: Liste von Genen, deren Expression durch Pep13-, HrpZ<sub>Psp</sub>- und NLP<sub>Pp</sub>-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus                      | AGI Code  | Accession-nummer | Protein/Mögliche Funktion  |
|---------|------------|----------------|---------------------------------|-----------|------------------|--|
| PC501-1 | 263        | 43/50          | Petroselinum crispum            |           | AAK69402         | immediate-early fungal elicitor protein CMPG1, Eli17 (see 334-4) |
| PC501-2 | 263        | 43/50          | Petroselinum crispum            |           | AAK69402         | immediate-early fungal elicitor protein CMPG1, Eli17 (see 334-4) |
| PC501-3 | 263        | 43/50          | Petroselinum crispum            |           | AAK69402         | immediate-early fungal elicitor protein CMPG1, Eli17 (see 334-4) |
| PC501-4 | 263        | 43/50          | Petroselinum crispum            |           | AAK69402         | immediate-early fungal elicitor protein CMPG1, Eli17 (see 334-4) |
| PC605-1 | 71         |                |                                 |           |                  | no significant similarity found                                  |
| PC605-2 | 71         |                |                                 |           |                  | no significant similarity found                                  |
| PC605-3 | 73         | 20/23          | Ipomoea nil                     |           | Q96471           | S-adenosylmethionine decarboxylase proenzyme                     |
| PC605-4 | 71         |                |                                 |           |                  | no significant similarity found                                  |
| PC685-1 | 150        | 36/49          | Arabidopsis thaliana            | At3g13610 | NP_187970        | oxidoreductase (see 724-3)                                       |
| PC685-2 | 243        | 44/61          | Paracoccus denitrificans PD1222 |           | ZP_00630616      | conserved hypothetical protein (see 687-1)                       |
| PC685-3 | 232        | 26/34          | Arabidopsis thaliana            | At1g07810 | NP_172259        | ECA1; calcium-transporting ATPase                                |
| PC685-4 | 252        | 45/82          | Lotus japonicus                 |           | BAD95981         | Ser/Thr protein kinase   |

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**Tabelle 7-35: Liste von Genen, deren Expression durch Pep13-, HrpZ<sub>Psp</sub>- und LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus                 | AGI Code  | Accession-nummer | Protein/Mögliche Funktion                                   |
|---------|------------|----------------|----------------------------|-----------|------------------|---|
| PC259-1 | 272        | 49/55          | Arabidopsis thaliana       | AT5G01220 | NP_568085        | SQD2 (SULFOQUINOVOSYLDIACYLGLYCEROL 2)                      |
| PC259-2 | 273        | -              |                            | -         | -                | no significant similarity found                             |
| PC259-3 | 272        | 44/50          | Arabidopsis thaliana       | AT4G16143 | NP_567485        | protein transporter   |
| PC259-4 | 265        | 74/86          | Arabidopsis thaliana       | AT1G51710 | NP_564596        | UBP6 (UBIQUITIN-SPECIFIC PROTEASE 6)                        |
| PC296-1 | 162        | -              |                            | -         | -                | no significant similarity found                             |
| PC296-3 | 171        | -              |                            | -         | -                | no significant similarity found                             |
| PC317-1 | 107        | -              |                            | -         | -                | no significant similarity found                             |
| PC317-2 | 107        | -              |                            | -         | -                | no significant similarity found                             |
| PC317-3 | 107        | -              |                            | -         | -                | no significant similarity found                             |
| PC317-4 | 116        | -              |                            | -         | -                | no significant similarity found                             |
| PC321-2 | 205        | 19/24          | Arabidopsis thaliana       | At1g31940 | NP_564386        | expressed protein   |
| PC321-3 | 268        | -              |                            | -         | -                | no significant similarity found                             |
| PC321-4 | 257        | 17/33          | Bacteroides fragilis YCH46 |           | BAD48607         | probable urea transport protein                             |
| PC321-6 | 262        | 61/86          | Arabidopsis thaliana       | At2g36430 | NP_181184        | hypothetical protein  |
| PC399-1 | 176        | 32/57          | Nicotiana tabacum          |           | AAF98369         | patatin-like protein I or 3, (see 396-3)                    |
| PC399-2 | 177        | 32/57          | Nicotiana tabacum          |           | AAF98369         | patatin-like protein I or 3, (see 396-3)                    |
| PC399-3 | 175        | 32/57          | Nicotiana tabacum          |           | AAF98369         | patatin-like protein I or 3, (see 396-3)                    |
| PC399-4 | 175        | 32/57          | Nicotiana tabacum          |           | AAF98369         | patatin-like protein I or 3, (see 396-3)                    |
| PC439-1 | 81         | 24/26          | Arabidopsis thaliana       | At3g49430 | NP_190512        | pre-mRNA splicing factor, putative                          |
| PC439-2 | 81         | 24/26          | Arabidopsis thaliana       | At3g49430 | NP_190512        | pre-mRNA splicing factor, putative                          |
| PC439-4 | 81         | 24/26          | Arabidopsis thaliana       | At3g49430 | NP_190512        | pre-mRNA splicing factor, putative                          |
| PC439-3 | 29         | -              |                            | -         | -                | no significant similarity found                             |
| PC535-1 | 194        | 63/64          | Petroselinum crispum       |           | AAA98491         | anionic peroxidase (see 113-2)                              |
| PC535-4 | 192        | 37/63          | Arabidopsis thaliana       | AT1G53280 | NP_564626        | unknown protein   |
| PC539-2 | 133        | 15/24          | Arabidopsis thaliana       | At4g24850 | NP_194216        | ATP binding / nucleoside-triphosphatase/ nucleotide binding |
| PC539-3 | 126        | -              |                            | -         | -                | no significant similarity found                             |
| PC539-4 | 131        | -              |                            | -         | -                | no significant similarity found                             |

|         |    |       |                       |   |          |                                 |
|---------|----|-------|-----------------------|---|----------|---------------------------------|
| PC553-1 | 89 | -     |                       | - | -        | no significant similarity found |
| PC553-4 | 91 | -     |                       | - | -        | no significant similarity found |
| PC553-2 | 92 | -     |                       | - | -        | no significant similarity found |
| PC785-1 | 86 | -     |                       | - | -        | no significant similarity found |
| PC785-2 | 90 | 22/28 | <i>Lactuca sativa</i> |   | AAL77102 | carbohydrate oxidase            |
| PC785-3 | 90 | 22/28 | <i>Lactuca sativa</i> |   | AAL77102 | carbohydrate oxidase            |
| PC785-4 | 90 | 18/27 | <i>Lactuca sativa</i> |   | AAL77102 | carbohydrate oxidase            |

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**Tabelle 7-36: Liste von Genen, deren Expression durch Pep13-, NLP<sub>Pp</sub>- und LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus                         | AGI Code   | Accession-nummer | Protein/Mögliche Funktion  |
|---------|------------|----------------|------------------------------------|------------|------------------|--|
| PC300-1 | 210        | 40/61          | Arabidopsis thaliana               | A t2g02960 | NP_178396        | protein binding / ubiquitin-protein ligase/ zinc ion binding (see 569-1)               |
| PC300-2 | 153        | 30/47          | Arabidopsis thaliana               | A t3g62260 | NP_191785        | catalytic/ protein phosphatase type 2C (see 569-2)                                     |
| PC300-3 | 211        | 29/59          | Arabidopsis thaliana               | A t1g30760 | NP_174363        | electron carrier (see364-3)  |
| PC300-4 | 269        | 38/73          | Arabidopsis thaliana               | A t3g14650 | NP_188083        | CYP72A11; heme binding / iron ion binding / monooxygenase/ oxygen binding (BUT no apo) |
| PC309-1 | 158        |                |                                    |            |                  | no significant similarity found  |
| PC309-4 | 158        |                |                                    |            |                  | no significant similarity found  |
| PC309-2 | 168        |                |                                    |            |                  | no significant similarity found  |
| PC326-1 | 235        |                |                                    |            |                  | no significant similarity found  |
| PC326-2 | 196        | 52/65          | Arabidopsis thaliana               | A t5g23720 | NP_851066        | PHS1 (PROPYZAMIDE-HYPERSENSITIVE 1)  |
| PC326-3 | 199        | 41/64          | Nicotiana tabacum                  |            | AAD47832         | cytochrome P450 (see 454-3)  |
| PC506-1 | 124        | 27/39          | Verbascum thapsus                  |            | AAL08686         | ADH2 (see 525-1)   |
| PC506-2 | 124        | 27/39          | Verbascum thapsus                  |            | AAL08686         | ADH2 (see 525-1)   |
| PC506-3 | 124        | 27/39          | Verbascum thapsus                  |            | AAL08686         | ADH2 (see 525-1)   |
| PC506-4 | 124        | 27/39          | Verbascum thapsus                  |            | AAL08686         | ADH2 (see 525-1)   |
| PC582-1 | 310        | 27/46          | Arabidopsis thaliana               | A t1g49760 | NP_564554        | PAB8   |
| PC582-2 | 310        | 45/84          | Arabidopsis thaliana               | A t1g49760 | NP_564554        | PAB8   |
| PC582-3 | 308        | 39/80          | Arabidopsis thaliana               | A t1g49760 | NP_564554        | PAB8   |
| PC582-4 | 303        | 38/49          | Medicago truncatula                |            | ABE93374         | Proteasome component region PCI  |
| PC584-1 | <320       | 18/23          | Arabidopsis thaliana               | A t4g23420 | NP_194073        | oxidoreductase (see 395-2) (BUT no taq)  |
| PC584-2 | <307       | 18/30          | Nicotiana glanca x N. langsdorffii |            | BAA05475         | tumor-related protein (BUT no apo)   |
| PC584-3 | <303       | 33/46          | Petroselinum crispum               |            | AAA98491         | anionic peroxidase (see 113-2)   |
| PC584-4 | <237       | 16/36          | Lotus corniculatus var. Japonicus  |            | CAE45585         | coatomer alpha subunit-like protein  |
| PC585-3 | 249        | 34/35          | Petroselinum crispum               |            | AAA98491         | anionic peroxidase (see 589-4)   |
| PC718-1 | 258        |                |                                    |            |                  | no significant similarity found  |
| PC718-2 | 202        | 17/29          | Nicotiana tabacum                  |            | AAD47832         | cytochrome P450 (see 326-3)  |
| PC718-3 | 204        | 27/38          | Gossypium hirsutum                 |            | AAL93154         | bacterial-induced class III peroxidase (see 691-1-4)                                   |
| PC718-4 | 224        | 55/73          | Arabidopsis thaliana               | A t5g44400 | NP_199253        | electron carrier (see 268-2)   |

|         |     |       |   |            |           |   |
|---------|-----|-------|---|------------|-----------|---|
| PC720-1 | 194 | 42/63 | Arabidopsis thaliana                        | A t3g61800 | NP_191739 | expressed protein   |
| PC720-2 | 154 | 29/38 | Gossypium hirsutum                          |            | AAL93154  | bacterial-induced class III peroxidase (see 691-1-4)      |
| PC720-3 | 147 | 41/47 | Arabidopsis thaliana                        | A t2g04740 | NP_178551 | protein binding   |
| PC720-4 | 146 | 22/23 | Petroselinum crispum                        |            | P42754    | mannitol dehydrogenase (NAD-dependent mannitol DH), Eli 3 |
| PC816-1 | 193 | 35/63 | Nicotiana langsdorffii x Nicotiana sanderae |            | AAP30840  | nectarin 5  |
| PC816-2 | 193 | 35/63 | Nicotiana langsdorffii x Nicotiana sanderae |            | AAP30840  | nectarin 5  |
| PC816-3 | 188 | 20/28 | Arabidopsis thaliana                        | A t1g13360 | NP_683304 | expressed protein   |
| PC816-4 | 193 | 35/63 | Nicotiana langsdorffii x Nicotiana sanderae |            | AAP30840  | nectarin 5  |

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**Tabelle 7-37: Liste von Genen, deren Expression durch HrpZ<sub>Psp</sub>-, NLP<sub>Pp</sub>- und LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon      | Länge [bp] | BlastX [AS/AS] | Organismus                       | AGI Code  | Accession-nummer | Protein/Mögliche Funktion                                  |
|-----------|------------|----------------|----------------------------------|-----------|------------------|--|
| PC491-1   | 268        | 13/16          | Arabidopsis thaliana             | AT1G10930 | NP_172562        | ATSGS1   |
| PC491-2   | 270        | 38/49          | Arabidopsis thaliana             | At5g52590 | NP_200072        | unknown protein  |
| PC491-3   | 264        | 26/42          | Arabidopsis thaliana             | At2g14120 | NP_565362        | GTP binding / GTPase                                       |
| PC663-1   | 273        | 19/30          | Medicago truncatula              |           | ABE87175         | hypothetical protein MtrDRAFT_AC151668g16v1                |
| PC663-2   | 278        | 20/30          | Medicago truncatula              |           | ABE87175         | hypothetical protein MtrDRAFT_AC151668g16v1                |
| PC663-3   | 277        | 28/45          | Arabidopsis thaliana             | At1g19860 | NP_564096        | nucleic acid binding                                       |
| PC663-4   | 272        | 20/30          | Medicago truncatula              |           | ABE87175         | hypothetical protein MtrDRAFT_AC151668g16v1                |
| PC665-1-1 | 243        | 43/61          | Paracoccus denitrificans PD1222  |           | ZP_00630616      | conserved hypothetical protein (see 664-1-3)               |
| PC665-1-2 | 201        | 56/66          | Linum usitatissimum              |           | AAB02926         | peroxidase (see 722-2)                                     |
| PC665-1-3 | 243        | 42/56          | Paracoccus denitrificans PD1222  |           | ZP_00630616      | conserved hypothetical protein (see 664-1-3)               |
| PC665-1-4 | 243        | 38/80          | Paracoccus denitrificans PD1222  |           | ZP_00630616      | conserved hypothetical protein (see 664-1-3)               |
| PC665-2-1 | 236        |                |                                  |           |                  | no significant similarity found                            |
| PC665-2-2 | 238        | 21/38          | Corynebacterium efficiens YS-314 |           | NP_738153        | conserved hypothetical protein (ähnlich 664-1-1) (see 738) |
| PC665-2-3 | 196        | 36/45          | Vigna angularis                  |           | BAA01950         | peroxidase, cationic (ähnlich 665-1-2)                     |
| PC665-2-4 | 238        | 10/16          | Corynebacterium efficiens YS-314 |           | NP_738153        | conserved hypothetical protein (ähnlich 664-1-1) (see 738) |

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**Tabelle 7-38: Liste von Genen, deren Expression durch Pep13-, HrpZ<sub>Psp</sub>-, NLP<sub>Pp</sub>- und LPS-Behandlung nach 4 h induziert wird.**

cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon      | Länge [bp] | BlastX [AS/AS] | Organismus           | AGI Code  | Accession-nummer | Protein/Mögliche Funktion   |
|-----------|------------|----------------|----------------------|-----------|------------------|---|
| PC254-1   | 270        | 41/46          | Petroselinum crispum |           | AAA98491         | anionic peroxidase (see 113-2)  |
| PC254-2   | 270        | 57/65          | Arabidopsis thaliana | At1g07890 | NP_172267        | APX1  |
| PC254-3   | 265        | 31/96          | Danio rerio          |           | XP_694208        | PREDICTED: similar to zinc finger protein 91 (HPF7, HTF10)  |
| PC254-4   | ca 208     | 39/40          | Petroselinum crispum |           | AAA98491         | anionic peroxidase (see 113-2)  |
| PC255-1-1 | 468        | 85/116         | Petroselinum crispum |           | CAA48413         | BPF-1a protein  |
| PC255-1-2 | 469        | 103/158        | Petroselinum crispum |           | CAA48413         | BPF-1a protein  |
| PC255-1-3 | 472        | 71/95          | Petroselinum crispum |           | CAA48413         | BPF-1a protein  |
| PC255-1-4 | 466        | 103/151        | Petroselinum crispum |           | CAA48413         | BPF-1a protein  |
| PC255-2-2 | 260        | 43/72          | Arabidopsis thaliana | At1g30760 | NP_174363        | electron carrier (see pc300-3)  |
| PC255-2-3 | 258        | 14/24          | Arabidopsis thaliana | At5g41990 | NP_568599        | WNK8  |
| PC255-2-4 | 287        | 33/81          | Papaver somniferum   |           | AAC61842         | tyrosin/dopa decarboxylase  |
| PC262-1   | 212        | 29/34          | Arabidopsis thaliana | At4g24190 | NP_974606        | SHD (SHEPHERD)<br>no significant similarity found   |
| PC262-2   | 208        |                |                      |           |                  |   |
| PC262-3   | 203        | 48/52          | Arabidopsis thaliana | At2g01350 | NP_565259        | nicotinate-nucleotide diphosphorylase (carboxylating)   |
| PC262-4   | 206        | 34/68          | Oryza sativa         |           | BAC79712         | Putative NADPH HC toxin reductase   |
| PC264-1   | 70         | 16/22          | Daucus carota        |           | BAB68539         | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC264-2   | 70         | 16/22          | Daucus carota        |           | BAB68539         | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC264-3   | 69         |                |                      |           |                  | no significant similarity found   |
| PC264-4   | 78         |                |                      |           |                  | no significant similarity found   |
| PC267-2   | 187        |                |                      |           |                  | no significant similarity found   |
| PC267-3   | 168        |                |                      |           |                  | no significant similarity found   |
| PC267-4   | 147        |                |                      |           |                  | no significant similarity found   |
| PC273-1   | 91         |                |                      |           |                  | no significant similarity found   |
| PC273-2   | 101        |                |                      |           |                  | no significant similarity found   |
| PC273-3   | 182        | 27/36          | Arabidopsis thaliana | At4g03230 | NP_192232        | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding |
| PC273-4   | 112        |                |                      |           |                  | no significant similarity found   |
| PC276-1   | 271        | 30/43          | Arabidopsis thaliana | At2g28590 | NP_180426        | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase (see 564-1)    |

|         |     |        |                                   |           |           |   |
|---------|-----|--------|-----------------------------------|-----------|-----------|---|
| PC276-2 | 271 | 13/35  | Synechococcus sp. JA 2 3B'a(2 13) |           | YP_476967 | hypothetical protein CYB_0720   |
| PC276-3 | 271 | 48/66  | Arabidopsis thaliana              | At4g11600 | NP_192897 | ATGPX6 (GLUTATHIONE PEROXIDASE 6)                                       |
| PC276-4 | 275 | 23/30  | Arabidopsis thaliana              | At2g44900 | NP_566029 | ubiquitin-protein ligase (see 564-4)                                    |
| PC277-1 | 207 | 16/50  | Treponema denticola ATCC 35405    |           | NP_972102 | putative chromosome partition protein SmC                               |
| PC277-2 | 221 | 41/51  | Daucus carota                     |           | BAA03413  | EDGP precursor (see 566-2)  |
| PC277-3 | 220 |        |                                   |           |           | no significant similarity found   |
| PC277-4 | 209 |        |                                   |           |           | no significant similarity found   |
| PC283-2 | 350 | 38/79  | Arabidopsis thaliana              | At3g26040 | NP_189233 | acyltransferase-like protein (see 774-3)                                |
| PC283-3 | 340 | 73/107 | Arabidopsis thaliana              | At3g07090 | NP_187365 | unknown protein   |
| PC283-4 | 127 |        |                                   |           |           | no significant similarity found   |
| PC288-1 | 278 |        |                                   |           |           | no significant similarity found   |
| PC288-2 | 272 | 47/61  | Arabidopsis thaliana              | At2g28310 | NP_850118 | unknown protein   |
| PC288-3 | 278 |        |                                   |           |           | no significant similarity found   |
| PC288-4 | 271 | 79/89  | Oryza sativa                      |           | NP_915679 | putative ammonium transporter   |
| PC293-1 | 255 | 59/72  | Arabidopsis thaliana              | At1g59830 | NP_176192 | PP2A-1  |
| PC293-4 | 212 | 69/70  | Petroselinum crispum              |           | AAA33861  | Tyr-DC (Eli 5) (see 312-1)  |
| PC294-1 | 254 | 25/47  | Oryza sativa                      |           | BAC57400  | putative 3-ketoacyl-acyl carrier protein reductase                      |
| PC294-2 | 212 | 69/70  | Petroselinum crispum              |           | AAA33861  | Tyr-DC (Eli 5) (see 312-1)  |
| PC294-3 | 212 | 68/70  | Petroselinum crispum              |           | AAA33861  | Tyr-DC (Eli 5) (see 312-1)  |
| PC294-4 | 211 | 63/64  | Petroselinum crispum              |           | AAA33861  | Tyr-DC (Eli 5) (see 312-1)  |
| PC295-1 | 213 | 68/71  | Petroselinum crispum              |           | AAA33861  | Tyr-DC (Eli 5) (see 312-1)  |
| PC295-4 | 271 |        |                                   |           |           | no significant similarity found   |
| PC297-4 | /   | 68/132 | Arabidopsis thaliana              | At5g61820 | NP_200990 | unknown protein   |
| PC301-1 | 210 | 52/57  | Arabidopsis thaliana              | At1g31930 | NP_174475 | extra-large guanine nucleotide binding protein, putative                |
| PC301-2 | 213 | 14/21  | Arabidopsis thaliana              | At5g43580 | NP_199171 | serine-type endopeptidase inhibitor (see 266-3)                         |
| PC301-4 | 213 | 51/26  | Daucus carota                     |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 372-3)            |
| PC310-1 | 301 | 43/85  | Arabidopsis thaliana              | At1g72310 | NP_177375 | ATL3  |
| PC310-2 | 271 | 68/69  | Petroselinum crispum              |           | AAA33861  | Tyrosin-Decarboxylase (see 312-1)                                       |
| PC310-3 | 280 | 49/88  | Arabidopsis thaliana              | At1g26420 | NP_173966 | electron carrier (see 432-3)  |
| PC310-4 | 299 | 53/98  | Arabidopsis thaliana              | At1g26420 | NP_173966 | electron carrier (see 432-3)  |
| PC322-1 | 226 | 51/73  | Arabidopsis thaliana              | At5g35960 | NP_198445 | serine/threonine protein kinase-like                                    |
| PC322-2 | 226 | 51/73  | Arabidopsis thaliana              | At5g35960 | NP_198445 | serine/threonine protein kinase-like                                    |
| PC322-3 | 226 | 51/73  | Arabidopsis thaliana              | At5g35960 | NP_198445 | serine/threonine protein kinase-like                                    |
| PC322-4 | 226 | 51/73  | Arabidopsis thaliana              | At5g35960 | NP_198445 | serine/threonine protein kinase-like                                    |
| PC323-1 | 152 | 37/49  | Arabidopsis thaliana              | At3g57400 | NP_191299 | unknown protein   |
| PC323-2 | 154 | 19/21  | Arabidopsis thaliana              | At2g05710 | NP_178634 | RNA binding /aconitase hydratase/ hydro-lyase/ iron ion binding / lyase |

|         |     |         |                      |           |           |   |
|---------|-----|---------|----------------------|-----------|-----------|---|
| PC323-3 | 153 |         |                      |           |           | no significant similarity found   |
| PC323-4 | 152 | 37/49   | Arabidopsis thaliana | At3g57400 | NP_191299 | unknown protein   |
| PC328-1 | 250 | 58/73   | Arabidopsis thaliana | At5g66140 | NP_201415 | PAD2  |
| PC328-2 | 257 | 39/74   | Arabidopsis thaliana | At5g66140 | NP_201415 | PAD2  |
| PC328-3 | 250 | 39/52   | Arabidopsis thaliana | At5g66140 | NP_201415 | PAD2  |
| PC328-4 | 262 |         |                      |           |           | no significant similarity found   |
| PC330-1 | 205 | 48/68   | Arabidopsis thaliana | At4g37120 | NP_568017 | SMP2  |
| PC330-2 | 205 | 48/68   | Arabidopsis thaliana | At4g37120 | NP_568017 | SMP2  |
| PC330-3 | 205 | 48/68   | Arabidopsis thaliana | At4g37120 | NP_568017 | SMP2  |
| PC330-4 | 197 |         |                      |           |           | no significant similarity found   |
| PC347-1 | 376 | 107/123 | Arabidopsis thaliana | At1g70290 | NP_177186 | ATTPS8  |
| PC347-2 | 380 | 51/113  | Arabidopsis thaliana | At4g22030 | NP_193934 | F-box protein family (see 796-4)  |
| PC347-3 | 376 | 89/113  | Daucus carota        |           | BAA03413  | EDGP precursor (see 763-4)  |
| PC347-4 | 376 | 110/123 | Arabidopsis thaliana | At1g70290 | NP_177186 | trehalose-phosphate synthase [UDP-forming]  |
| PC349-1 | 208 | 19/59   | Arabidopsis thaliana | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC349-2 | 210 | 17/35   | Arabidopsis thaliana | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC349-3 | 211 | 31/63   | Arabidopsis thaliana | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC349-4 | 210 | 23/59   | Arabidopsis thaliana | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC357-1 | 262 | 40/66   | Populus alba         |           | BAE16616  | peroxidase  |
| PC357-2 | 277 |         |                      |           |           | no significant similarity found   |
| PC357-3 | 262 | 41/62   | Populus alba         |           | BAE16616  | peroxidase  |
| PC357-4 | 263 | 59/79   | Populus alba         |           | BAE16616  | peroxidase  |
| PC360-1 | 80  |         |                      |           |           | no significant similarity found   |
| PC360-2 | 71  |         |                      |           |           | no significant similarity found   |
| PC360-3 | 106 | 16/22   | Arabidopsis thaliana | At3g61980 | NP_567123 | serine-type endopeptidase inhibitor (see 318-1)   |
| PC366-1 | 158 | 30/52   | Arabidopsis thaliana | At2g34790 | NP_181025 | electron carrier  |
| PC366-2 | 158 | 26/47   | Arabidopsis thaliana | At2g34790 | NP_181025 | electron carrier  |
| PC366-3 | 158 | 31/52   | Arabidopsis thaliana | At2g34790 | NP_181025 | electron carrier (beste Sequenz)  |
| PC366-4 | 159 | 32/53   | Arabidopsis thaliana | At2g34790 | NP_181025 | electron carrier  |
| PC370-1 | 130 |         |                      |           |           | no significant similarity found   |
| PC370-2 | 130 |         |                      |           |           | no significant similarity found   |
| PC372-2 | 295 | 32/39   | Arabidopsis thaliana | At2g26600 | NP_565627 | hydrolase, hydrolyzing O-glycosyl compounds   |
| PC372-3 | 243 | 26/67   | Daucus carota        |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 375-1)  |
| PC372-4 | 292 | 49/79   | Nicotiana tabacum    |           | NP_196153 | peroxidase (see 107-1-4)  |
| PC373-1 | 70  |         |                      |           |           | no significant similarity found   |
| PC373-2 | 256 | 38/66   | Arabidopsis thaliana | At4g00400 | NP_191950 | acyltransferase   |

|         |     |       |                            |           |           |  |
|---------|-----|-------|----------------------------|-----------|-----------|--|
| PC373-3 | 278 | 53/92 | Arabidopsis thaliana       | At1g50200 | NP_175439 | ALATS (ALANYL-TRNA SYNTHETASE)                               |
| PC373-4 | 279 | 52/83 | Arabidopsis thaliana       | At1g50200 | NP_175439 | ALATS (ALANYL-TRNA SYNTHETASE)                               |
| PC375-1 | 244 | 71/80 | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 638-3) |
| PC375-2 | 244 | 71/80 | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 638-3) |
| PC375-4 | 244 | 71/80 | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 638-3) |
| PC376-1 | 123 |       |                            |           |           | no significant similarity found                              |
| PC376-2 | 123 |       |                            |           |           | no significant similarity found                              |
| PC376-3 | 130 | 28/33 | Artemisia annua            |           | CAA04872  | 1-aminocyclopropane-1-carboxylate oxidase                    |
| PC376-4 | 70  |       |                            |           |           | no significant similarity found                              |
| PC377-1 | 69  | 16/21 | Beta vulgaris              |           | CAC80990  | dihydroorotate (see 602-3)                                   |
| PC377-2 | 70  |       |                            |           |           | no significant similarity found                              |
| PC377-3 | 70  |       |                            |           |           | no significant similarity found                              |
| PC377-4 | 70  |       |                            |           |           | no significant similarity found                              |
| PC380-1 | 160 |       |                            |           |           | no significant similarity found                              |
| PC380-2 | 147 | 33/35 | Arabidopsis thaliana       | At4g31700 | NP_194898 | RPS6 (RIBOSOMAL PROTEIN S6) (see 368-2-1)                    |
| PC380-3 | 160 |       |                            |           |           | no significant similarity found                              |
| PC380-4 | 162 |       |                            |           |           | no significant similarity found                              |
| PC381-2 | 194 | 21/69 | Shewanella oneidensis MR 1 |           | NP_717426 | conserved hypothetical protein                               |
| PC381-3 | 191 |       |                            |           |           | no significant similarity found                              |
| PC381-4 | 194 | 39/69 | Arabidopsis thaliana       | At2g46900 | NP_566090 | unknown protein  |
| PC382-1 | 223 |       |                            |           |           | no significant similarity found                              |
| PC382-2 | 235 | 28/31 | Arabidopsis thaliana       | At4g20840 | NP_193816 | electron carrier   |
| PC382-3 | 227 |       |                            |           |           | no significant similarity found                              |
| PC382-4 | 226 |       |                            |           |           | no significant similarity found                              |
| PC383-1 | 220 |       |                            |           |           | no significant similarity found                              |
| PC383-2 | 216 |       |                            |           |           | no significant similarity found                              |
| PC383-3 | 220 |       |                            |           |           | no significant similarity found                              |
| PC383-4 | 220 |       |                            |           |           | no significant similarity found                              |
| PC384-1 | 175 | 38/44 | Lycopersicon esculentum    |           | AAN23154  | dihydrolipoamide dehydrogenase precursor                     |
| PC384-2 | 122 |       |                            |           |           | no significant similarity found                              |
| PC384-3 | 224 |       |                            |           |           | no significant similarity found                              |
| PC384-4 | 180 | 21/42 | Arabidopsis thaliana       | At3g07370 | NP_566305 | ubiquitin-protein ligase (see 394)                           |
| PC385-1 | 122 |       |                            |           |           | no significant similarity found                              |
| PC385-2 | 122 |       |                            |           |           | no significant similarity found                              |
| PC385-3 | 123 | 30/40 | Medicago truncatula        |           | ABE83038  | Proteinase inhibitor I13, potato inhibitor I                 |
| PC385-4 | 122 | 29/40 | Medicago truncatula        |           | ABE83038  | Proteinase inhibitor I13, potato inhibitor I                 |

|           |     |        |                         |           |           |  |
|-----------|-----|--------|-------------------------|-----------|-----------|--|
| PC387-1   | 179 | 15/28  | Arabidopsis thaliana    | At3g09220 | NP_187533 | copper ion binding   |
| PC387-2   | 181 | 54/59  | Arabidopsis thaliana    | At2g16440 | NP_179236 | ATP binding / DNA binding / DNA-dependent ATPase/nucleoside-triphosphatase/ nucleotide binding |
| PC387-3   | 185 |        |                         |           |           | no significant similarity found  |
| PC387-4   | 179 | 27/36  | Arabidopsis thaliana    | At3g56040 | NP_567031 | unknown protein  |
| PC389-1   | 95  | 30/30  | Petroselinum crispum    |           | AAG35658  | WRKY4 (see 508-4)  |
| PC389-2   | 94  | 30/30  | Petroselinum crispum    |           | AAG35658  | WRKY4 (see 508-4)  |
| PC389-3   | 94  | 30/30  | Petroselinum crispum    |           | AAG35658  | WRKY4 (see 508-4)  |
| PC390-1   | 232 | 32/74  | Daucus carota           |           | BAB68539  | (S)-reticuline oxidase-like protein (see 397-1)  |
| PC390-4   | 27  |        |                         |           |           | no significant similarity found  |
| PC391-3   | 171 | 16/41  | Arabidopsis thaliana    | At5g60250 | NP_200833 | ubiquitin-protein ligase/ zinc ion binding   |
| PC391-4   | 122 |        |                         |           |           | no significant similarity found  |
| PC393-1   | 207 | 37/68  | Oryza sativa            |           | BAC57706  | putative glucosyltransferase-2   |
| PC393-2   | 181 |        |                         |           |           | no significant similarity found  |
| PC393-3   | 35  |        |                         |           |           | no significant similarity found  |
| PC393-4   | 181 | 27/68  | Oryza sativa            |           | BAC57706  | putative glucosyltransferase-2   |
| PC395-1   | 180 | 17/30  | Arabidopsis thaliana    | At1g61290 | NP_176324 | SYP124; t-SNARE  |
| PC395-2   | 144 | 37/47  | Arabidopsis thaliana    | At4g23420 | NP_194073 | oxidoreductase (see 591-1)   |
| PC396-1   | 85  |        |                         |           |           | no significant similarity found  |
| PC396-2   | 173 | 21/22  | Arabidopsis thaliana    | At1g02780 | NP_171777 | EMB2386 (see 817-2)  |
| PC396-3   | 176 | 31/57  | Nicotiana tabacum       |           | AAF98369  | patatin-like protein I, see (399-1)  |
| PC396-4   | 178 |        |                         |           |           | no significant similarity found  |
| PC401-1-1 | 122 | 22/32  | Daucus carota           |           | BAB68539  | (S)-reticuline oxidase-like protein (see 397-1)  |
| PC401-1-2 | 132 | 19/39  | Oryza sativa            |           | NP_914902 | OSJNBa0052O12.20 (putative reverse transcriptase)  |
| PC401-1-3 | 76  |        |                         |           |           | no significant similarity found  |
| PC401-1-4 | 76  | Dez 23 | Oryza sativa            |           | ABA92487  | hypothetical protein LOC_Os11g16310 (ident. mit 401-1-4)                                       |
| PC401-2-1 | 76  | Dez 23 | Oryza sativa            |           | ABA92487  | hypothetical protein LOC_Os11g16310 (ident. mit 401-1-4)                                       |
| PC401-2-2 | 76  | Dez 23 | Oryza sativa            |           | ABA92487  | hypothetical protein LOC_Os11g16310 (ident. mit 401-1-4)                                       |
| PC401-2-3 | 76  | Dez 23 | Oryza sativa            |           | ABA92487  | hypothetical protein LOC_Os11g16310 (ident. mit 401-1-4)                                       |
| PC401-2-4 | 92  | 26/30  | Arabidopsis thaliana    | At2g21270 | NP_565504 | unknown protein (see 400-1-3)  |
| PC412-1   | 157 | 46/50  | Lycopersicon esculentum |           | CAA51679  | ubiquitin (see 597-4)  |
| PC412-2   | 336 | 16/23  | Arabidopsis thaliana    | At4g16146 | AAM64550  | unknown protein  |
| PC412-3   | 69  | 15/22  | Oryza sativa            |           | BAD82381  | putative S-receptor kinase (see 414-2-4)   |
| PC412-4   | 336 | 16/23  | Arabidopsis thaliana    | At4g16146 | AAM64550  | unknown protein  |
| PC413-1   | 300 | 94/99  | Daucus carota           |           | BAD16685  | plasma membrane H+-ATPase  |
| PC413-2   | 300 | 94/99  | Daucus carota           |           | BAD16685  | plasma membrane H+-ATPase  |
| PC413-3   | 300 | 94/99  | Daucus carota           |           | BAD16685  | plasma membrane H+-ATPase  |

|           |     |        |                      |           |           |   |
|-----------|-----|--------|----------------------|-----------|-----------|---|
| PC413-4   | 300 | 94/99  | Daucus carota        |           | BAD16685  | plasma membrane H+-ATPase   |
| PC414-1-1 | 266 | 34/70  | Arabidopsis thaliana | At2g05080 | NP_178583 | putative helicase (see 414-2-1)                                     |
| PC414-1-2 | 268 | 54/68  | Arabidopsis thaliana | At5g39610 | NP_198777 | ANAC092; transcription factor                                       |
| PC414-1-3 | 266 | 34/70  | Arabidopsis thaliana | At2g05080 | NP_178583 | putative helicase (see 414-2-1)                                     |
| PC414-1-4 | 269 | 74/89  | Arabidopsis thaliana | At5g39610 | NP_198777 | ANAC092; transcription factor                                       |
| PC414-2-1 | 265 | 34/70  | Arabidopsis thaliana | At2g05080 | NP_178583 | putative helicase (see 414-1-1)                                     |
| PC414-2-2 | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 416-1)                 |
| PC414-2-3 | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 416-1)                 |
| PC414-2-4 | 70  | 18/22  | Oryza sativa         |           | BAD82381  | putative S-receptor kinase (see 412-3)                              |
| PC416-1   | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 414-2)                 |
| PC416-2   | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 414-2)                 |
| PC416-3   | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 414-2)                 |
| PC417-1   | 107 | 15/20  | Arabidopsis thaliana | At1g23740 | NP_173786 | oxidoreductase/ zinc ion binding (see 210-3)                        |
| PC417-2   | 107 |        |                      |           |           | no significant similarity found                                     |
| PC417-3   | 142 | 28/46  | Oryza sativa         |           | AAN39049  | putative phosphate transporter OsPT8                                |
| PC417-4   | 109 | 22/41  | Arabidopsis thaliana | At5g01820 | NP_195802 | ATSR1 (SERINE/THREONINE PROTEIN KINASE 1)                           |
| PC418-1   | 69  |        |                      |           |           | no significant similarity found                                     |
| PC418-2   | 68  |        |                      |           |           | no significant similarity found                                     |
| PC418-3   | 69  |        |                      |           |           | no significant similarity found                                     |
| PC418-4   | 69  |        |                      |           |           | no significant similarity found                                     |
| PC427-1   | 98  |        |                      |           |           | no significant similarity found                                     |
| PC427-2   | 97  |        |                      |           |           | no significant similarity found                                     |
| PC427-3   | 97  |        |                      |           |           | no significant similarity found                                     |
| PC427-4   | 96  |        |                      |           |           | no significant similarity found                                     |
| PC431-1   | 290 | 33/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC431-2   | 290 | 35/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC431-3   | 290 | 35/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC431-4   | 292 | 33/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC432-2   | 83  | 24/27  | Arabidopsis thaliana | At5g40010 | NP_198817 | ATP binding / ATPase/ nucleoside-triphosphatase/ nucleotide binding |
| PC432-3   | 119 | 20/39  | Arabidopsis thaliana | At1g26420 | NP_173966 | electron carrier (see 310-3)  |
| PC432-4   | 225 | 57/74  | Arabidopsis thaliana | At5g61780 | NP_200986 | nuclease/ nucleic acid binding                                      |
| PC433-1   | 187 | 13/37  | Apis mellifera       |           | XP_624744 | PREDICTED: similar to dysfusion CG32474-PA                          |
| PC433-2   | 187 | 13/37  | Apis mellifera       |           | XP_624744 | PREDICTED: similar to dysfusion CG32474-PA                          |
| PC433-3   | 187 | 13/37  | Apis mellifera       |           | XP_624744 | PREDICTED: similar to dysfusion CG32474-PA                          |
| PC441-1   | 40  |        |                      |           |           | no significant similarity found                                     |
| PC441-3   | 42  |        |                      |           |           | no significant similarity found                                     |

|         |     |       |                      |           |           |  |
|---------|-----|-------|----------------------|-----------|-----------|--|
| PC441-4 | 56  |       |                      |           |           | no significant similarity found  |
| PC442-1 | 47  |       |                      |           |           | no significant similarity found  |
| PC442-2 | 44  |       |                      |           |           | no significant similarity found  |
| PC442-4 | 47  |       |                      |           |           | no significant similarity found  |
| PC443-1 | 46  |       |                      |           |           | no significant similarity found  |
| PC443-2 | 45  |       |                      |           |           | no significant similarity found  |
| PC443-3 | 44  |       |                      |           |           | no significant similarity found  |
| PC443-4 | 45  |       |                      |           |           | no significant similarity found  |
| PC451-1 | 358 | 43/77 | Arabidopsis thaliana | At2g32850 | NP_850199 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase |
| PC451-3 | 130 | 19/42 | Nicotiana tabacum    |           | AAD47832  | cytochrome P450 (see 326-3)  |
| PC452-1 | 217 | 47/66 | Arabidopsis thaliana | At1g34340 | NP_174694 | catalytic  |
| PC452-2 | 219 | 47/66 | Arabidopsis thaliana | At1g34340 | NP_174694 | catalytic  |
| PC452-3 | 216 | 27/46 | Arabidopsis thaliana | At1g34340 | NP_174694 | catalytic  |
| PC452-4 | 218 | 47/66 | Arabidopsis thaliana | At1g34340 | NP_174694 | catalytic  |
| PC454-1 | 75  | 18/21 | Arabidopsis thaliana | At2g47610 | NP_182283 | structural constituent of ribosome   |
| PC454-2 | 107 | 13/19 | Arabidopsis thaliana | At3g27080 | NP_189344 | TOM20-3  |
| PC454-3 | 129 | 18/40 | Nicotiana tabacum    |           | AAD47832  | cytochrome P450 (see 326-3)  |
| PC455-1 | 260 |       |                      |           |           | no significant similarity found  |
| PC455-2 | 254 | 24/58 | Arabidopsis thaliana | At5g40720 | NP_198888 | unknown protein (see 456-1)  |
| PC455-3 | 256 |       |                      |           |           | no significant similarity found  |
| PC456-1 | 255 | 28/82 | Arabidopsis thaliana | At5g40720 | NP_198888 | unknown protein (see 455-2)  |
| PC456-3 | 257 | 18/31 | Arabidopsis thaliana | At5g01710 | NP_195791 | unknown protein  |
| PC456-4 | 255 | 30/82 | Arabidopsis thaliana | At5g40720 | NP_198888 | unknown protein (see 455-2)  |
| PC461-1 | 147 | 22/28 | Arabidopsis thaliana | At2g02960 | NP_178396 | protein binding / ubiquitin-protein ligase/ zinc ion binding(see 569-1)                |
| PC461-2 | 139 | 24/37 | Arabidopsis thaliana | At3g06250 | NP_566278 | unknown protein  |
| PC461-3 | 120 | 29/33 | Arabidopsis thaliana | At1g62020 | NP_176393 | protein transporter/ transporter   |
| PC461-4 | 131 | 20/35 | Arabidopsis thaliana | At2g46150 | NP_182138 | unknown protein (see 470-1)  |
| PC466-1 | 39  |       |                      |           |           | no significant similarity found  |
| PC466-2 | 39  |       |                      |           |           | no significant similarity found  |
| PC466-3 | 39  |       |                      |           |           | no significant similarity found  |
| PC470-1 | 191 | 31/61 | Arabidopsis thaliana | At2g46150 | NP_182138 | unknown protein (see 471-3)  |
| PC470-2 | 191 | 31/61 | Arabidopsis thaliana | At2g46150 | NP_182138 | unknown protein (see 471-3)  |
| PC470-3 | 191 | 31/61 | Arabidopsis thaliana | At2g46150 | NP_182138 | unknown protein (see 471-3)  |
| PC470-4 | 191 | 31/61 | Arabidopsis thaliana | At2g46150 | NP_182138 | unknown protein (see 471-3)  |
| PC473-1 | 217 | 30/37 | Petroselinum crispum |           | AAA98491  | anionic peroxidase (see 261-1)   |
| PC473-2 | 260 | 14/33 | Oryza sativa         |           | AAO72375  | putative RNA helicase (see 1-2)  |

|         |      |       |                           |           |           |  |
|---------|------|-------|---------------------------|-----------|-----------|--|
| PC478-1 | 252  |       |                           |           |           | no significant similarity found                                    |
| PC478-2 | 252  | 19/33 | Glycine max               |           | AAX56086  | homogentisate phytolprenyltransferase                              |
| PC478-3 | 237  | 51/78 | Nicotiana plumbaginifolia |           | CAC40990  | ABC 1 protein  |
| PC478-4 | 252  | 19/33 | Glycine max               |           | AAX56086  | homogentisate phytolprenyltransferase                              |
| PC480-2 | <171 | 16/44 | Mus musculus              |           | XP_156355 | hypothetical protein   |
| PC482-1 | 332  | 42/55 | Arabidopsis thaliana      | At4g18670 | NP_193602 | protein binding (BUT no apo)                                       |
| PC482-2 | 340  | 30/67 | Arabidopsis thaliana      | At4g33920 | NP_195118 | catalytic/ protein phosphatase type 2C (BUT no apo)                |
| PC482-3 | 285  |       |                           |           |           | no significant similarity found (BUT no apo)                       |
| PC482-4 | 45   |       |                           |           |           | no significant similarity found                                    |
| PC483-1 | 96   |       |                           |           |           | no significant similarity found                                    |
| PC483-2 | 45   |       |                           |           |           | no significant similarity found                                    |
| PC483-3 | 303  | 72/87 | Petroselinum crispum      |           | AAA98491  | anionic peroxidase (see 261-1) (BUT no taq)                        |
| PC483-4 | 278  | 18/36 | Nicotiana tabacum         |           | AAB88854  | S-adenosylmethionine decarboxylase (BUT no apo)                    |
| PC484-2 | 177  | 27/58 | Arabidopsis thaliana      | At4g32010 | NP_194929 | transcription factor similar to VPI/AB13 family regulatory protein |
| PC486-3 | 87   |       |                           |           |           | no significant similarity found                                    |
| PC489-1 | 229  | 39/73 | Arabidopsis thaliana      | At1g22360 | NP_173653 | AT2 (see 488-4)  |
| PC489-2 | 289  | 25/52 | Daucus carota             |           | AAA98927  | EP4b   |
| PC489-3 | 285  | 34/73 | Glycine max               |           | AAN12272  | subtilisin-like protein C1 (see 608-1)                             |
| PC489-4 | 285  | 82/94 | Arabidopsis thaliana      | At3g62860 | NP_191845 | catalytic/ hydrolase (see 608-4)                                   |
| PC490-2 | 252  |       |                           |           |           | no significant similarity found                                    |
| PC490-3 | 187  | 22/54 | Gentiana triflora         |           | BAA74428  | Anthocyanin 5-aromatic acyltransferase (5AT)                       |
| PC490-4 | 145  | 22/36 | Arabidopsis thaliana      | At1g63710 | NP_176558 | CYP86A7; oxygen binding  |
| PC492-1 | 155  | 27/34 | Arabidopsis thaliana      | At5g47780 | NP_568688 | transferase, transferring glycosyl groups                          |
| PC492-2 | 214  | 37/70 | Arabidopsis thaliana      | At3g17840 | NP_566589 | RLK902 (see 611-2)   |
| PC492-3 | 214  | 37/70 | Arabidopsis thaliana      | At3g17840 | NP_566589 | RLK902 (see 611-2)   |
| PC492-4 | 214  | 37/70 | Arabidopsis thaliana      | At3g17840 | NP_566589 | RLK902 (see 611-2)   |
| PC494-1 | 153  | 19/19 | Oryza sativa              |           | AAX95352  | dnaK-type molecular chaperone hsp70                                |
| PC494-2 | 158  |       |                           |           |           | no significant similarity found                                    |
| PC494-3 | 153  | 20/33 | Oryza sativa              |           | AAX95352  | dnaK-type molecular chaperone hsp70                                |
| PC498-1 | 100  | 28/33 | Arabidopsis thaliana      | At4g13350 | NP_193071 | unknown protein  |
| PC498-2 | 100  | 28/33 | Arabidopsis thaliana      | At4g13350 | NP_193071 | unknown protein  |
| PC498-3 | 101  | 28/33 | Arabidopsis thaliana      | At4g13350 | NP_193071 | unknown protein  |
| PC498-4 | 100  | 28/33 | Arabidopsis thaliana      | At4g13350 | NP_193071 | unknown protein  |
| PC517-1 | 108  |       |                           |           |           | no significant similarity found                                    |
| PC517-2 | 102  |       |                           |           |           | no significant similarity found                                    |
| PC517-3 | 108  |       |                           |           |           | no significant similarity found                                    |

|           |     |       |                                   |           |           |   |
|-----------|-----|-------|-----------------------------------|-----------|-----------|---|
| PC517-4   | 111 |       |                                   |           |           | no significant similarity found                               |
| PC519-1-1 | 366 | 17/30 | Arabidopsis thaliana              | At2g36220 | NP_565838 | unknown protein   |
| PC519-1-3 | 376 | 30/65 | Arabidopsis thaliana              | At2g23740 | NP_179954 | nucleic acid binding / transcription factor/ zinc ion binding |
| PC519-1-4 | 354 | 23/70 | Verminephrobacter eiseniae EF01 2 | EAT71611  |           | glycosyl transferase, family 2                                |
| PC519-2-1 | 251 | 21/46 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 529-3)                             |
| PC519-2-2 | 248 | 25/64 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 529-3)                             |
| PC519-2-3 | 246 | 28/69 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3   |
| PC519-2-4 | 243 | 20/36 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 529-3)                             |
| PC521-1-1 | 196 | 36/48 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 399)                              |
| PC521-1-2 | 238 | 25/37 | Nicotiana tabacum                 |           | CAD47830  | hydroxy cinnamoyl transferase (see 508-2)                     |
| PC521-1-3 | 239 | 33/68 | Nicotiana tabacum                 |           | CAD47830  | hydroxy cinnamoyl transferase (see 508-2)                     |
| PC521-1-4 | 196 | 31/56 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 399)                              |
| PC521-2-1 | 194 | 38/57 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 399)                              |
| PC521-2-2 | 194 | 47/61 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 399)                              |
| PC521-2-3 | 191 | 47/61 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 399)                              |
| PC521-2-4 | 194 | 38/57 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 399)                              |
| PC523-1   | 87  | 14/21 | Arabidopsis thaliana              | At3g48410 | NP_190412 | catalytic/ hydrolase  |
| PC523-2   | 247 | 71/77 | Prunus persica                    |           | CAB69824  | H+-exporting ATPase (EC 3.6.3.6), plasmamembrane              |
| PC523-3   | 244 | 28/34 | Nicotiana tabacum                 |           | BAB92011  | pleiotropic drug resistance (PDR) like protein (see 812-2)    |
| PC523-4   | 91  | 23/29 | Arabidopsis thaliana              | At5g51950 | NP_200008 | FAD binding / aldehyde-lyase/ oxidoreductase (see 526-1)      |
| PC527-1   | 148 | 27/49 | Arabidopsis thaliana              | At5g25930 | NP_197965 | receptor related protein kinase-like (LRR)                    |
| PC527-2   | 147 | 10/18 | Aedes aegypti                     |           | EAT48670  | acyl-CoA oxidase  |
| PC527-3   | 148 | 27/49 | Arabidopsis thaliana              | At5g25930 | NP_197965 | receptor related protein kinase-like (LRR)                    |
| PC527-4   | 148 | 22/34 | Medicago sativa                   |           | CAB54847  | hydroperoxide lyase   |
| PC529-1   | 249 | 40/56 | Nicotiana tabacum                 |           | BAB16426  | EIG-I24   |
| PC529-2   | 221 | 32/46 | Lycopersicon esculentum           |           | AAC50047  | transcription factor Pti 4                                    |
| PC529-3   | 291 | 37/66 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 519-2-2)                           |
| PC529-4   | 192 | 12/14 | Daucus carota                     |           | BAD04841  | pathogenesis-related protein-like protein 1                   |
| PC531-1   | 135 | 20/35 | Pyrus pyrifolia                   |           | AAT28309  | leucine-rich repeat receptor-like protein kinase              |
| PC531-3   | 161 | 26/48 | Daucus carota                     |           | AAB50843  | elicitor induced glycoprotein iEP4                            |
| PC531-4   | 198 | 33/38 | Nicotiana tabacum                 |           | AAF98369  | patatin-like protein 3 (see 521-1-1)                          |
| PC532-1-1 | 79  |       |                                   |           |           | no significant similarity found                               |
| PC532-1-2 | 90  |       |                                   |           |           | no significant similarity found                               |
| PC532-1-3 | 79  |       |                                   |           |           | no significant similarity found                               |
| PC532-1-4 | 139 | 23/46 | Arabidopsis thaliana              | At2g36090 | NP_181153 | unknown protein (see 533-1-1)                                 |
| PC532-2-1 | 64  |       |                                   |           |           | no significant similarity found                               |

|           |     |        |                         |           |           |  |
|-----------|-----|--------|-------------------------|-----------|-----------|--|
| PC532-2-2 | 90  |        |                         |           |           | no significant similarity found  |
| PC532-2-3 | 91  |        |                         |           |           | no significant similarity found  |
| PC532-2-4 | 65  |        |                         |           |           | no significant similarity found  |
| PC542-1   | 76  |        |                         |           |           | no significant similarity found  |
| PC542-2   | 74  |        |                         |           |           | no significant similarity found  |
| PC542-3   | 72  |        |                         |           |           | no significant similarity found  |
| PC542-4   | 76  |        |                         |           |           | no significant similarity found  |
| PC555-1   | 112 |        |                         |           |           | no significant similarity found  |
| PC555-2   | 130 | 23/44  | Arabidopsis thaliana    | At3g15980 | NP_188219 | protein transporter  |
| PC555-4   | 102 |        |                         |           |           | no significant similarity found  |
| PC561-2   | 216 | 18/29  | Forsythia x intermedia  |           | AAF64175  | phenylcoumaran benzyllic ether reductase homolog F2  |
| PC564-1   | 271 | 30/43  | Arabidopsis thaliana    | At2g28590 | NP_180426 | ATP binding / kinase/ protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase (see 276-1) |
| PC564-2   | 271 |        |                         |           |           | no significant similarity found  |
| PC564-3   | 271 | 51/66  | Arabidopsis thaliana    | At4g11600 | NP_192897 | ATGPX6 (GLUTATHIONE PEROXIDASE 6)  |
| PC564-4   | 277 | 37/55  | Arabidopsis thaliana    | At2g44900 | NP_566029 | ubiquitin-protein ligase putative arm repeat protein (see 276-4)   |
| PC566-1   | 253 |        |                         |           |           | no significant similarity found  |
| PC566-2   | 221 | 31/39  | Daucus carota           |           | BAA03413  | EDGP precursor (see 763-4)   |
| PC566-3   | 221 |        |                         |           |           | no significant similarity found  |
| PC566-4   | 212 |        |                         |           |           | no significant similarity found  |
| PC568-1   | 481 | 63/116 | Arabidopsis thaliana    | At1g77280 | NP_177852 | ATP binding / kinase/ protein kinase/ protein serine/threonine   |
| PC568-2   | 455 | 55/107 | Malus x domestica       |           | AAP86780  | Mal d 1-associated protein   |
| PC568-3   | 473 | 64/98  | Arabidopsis thaliana    | At3g13580 | NP_187967 | structural constituent of ribosome / transcription regulator   |
| PC569-1   | 209 | 47/70  | Arabidopsis thaliana    | At2g02960 | NP_178396 | protein binding / ubiquitin-protein ligase/ zinc ion binding (see 300-1)                                   |
| PC569-2   | 152 | 30/47  | Arabidopsis thaliana    | At3g62260 | NP_191785 | catalytic/ protein phosphatase type 2C (see 300-2)   |
| PC569-4   | 209 | 43/69  | Glycine max             |           | ABC68405  | cytochrome P450 monooxygenase CYP72A68   |
| PC575-1   | 129 | 41/43  | Arabidopsis thaliana    | At1g09430 | NP_172414 | ACLA-3   |
| PC575-2   | 570 | 82/124 | Lycopersicon esculentum |           | AAF22236  | Pirin  |
| PC575-3   | 137 | 16/22  | Solanum tuberosum       |           | AAA81891  | probable epoxide hydrolase (EC 3.3.2.3)  |
| PC575-4   | 562 | 85/124 | Lycopersicon esculentum |           | AAF22236  | Pirin  |
| PC578-1   | 198 | 19/40  | Arabidopsis thaliana    | At4g27500 | NP_194480 | PPI1 (PROTON PUMP INTERACTOR 1)  |
| PC578-2   | 187 | 29/51  | Arabidopsis thaliana    | At4g16144 | NP_680708 | unknown protein (see 579-1)  |
| PC578-3   | 187 | 28/51  | Arabidopsis thaliana    | At4g16144 | NP_680708 | unknown protein (see 579-1)  |
| PC578-4   | 199 | 18/32  | Arabidopsis thaliana    | At4g27500 | NP_194480 | PPI1 (PROTON PUMP INTERACTOR 1)  |
| PC579-1   | 187 | 27/51  | Arabidopsis thaliana    | At4g16144 | NP_680708 | unknown protein (see 578-2)  |
| PC579-2   | 181 | 45/60  | Arabidopsis thaliana    | At4g31780 | NP_194906 | MGD1 (MONOGALACTOSYLDIACYLGLYCEROL SYNTHASE 1)   |
| PC579-3   | 187 | 17/39  | Arabidopsis thaliana    | At1g73760 | NP_177517 | protein binding / ubiquitin-protein ligase/ zinc ion binding   |

|           |     |         |                      |           |           |   |
|-----------|-----|---------|----------------------|-----------|-----------|---|
| PC579-4   | 187 | 28/51   | Arabidopsis thaliana | At4g16144 | NP_680708 | unknown protein (see 578-2)   |
| PC581-1   | 81  |         |                      |           |           | no significant similarity found   |
| PC581-2   | 59  | 15/17   | Arabidopsis thaliana | At2g21380 | NP_565510 | kinesin motor protein-related   |
| PC581-3   | 83  | 17/26   | Arabidopsis thaliana | At1g56145 | NP_564710 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase  |
| PC581-4   | 83  | 17/26   | Arabidopsis thaliana | At1g56145 | NP_564710 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase  |
| PC591-1   | 223 | 15/23   | Arabidopsis thaliana | At4g23420 | NP_194073 | oxidoreductase (see 395-2)  |
| PC591-2   | 222 |         |                      |           |           | no significant similarity found   |
| PC591-3   | 215 | 30/46   | Nicotiana tabacum    |           | BAD93690  | glycosyltransferase NTGT5b  |
| PC591-4   | 221 | 34/51   | Arabidopsis thaliana | At4g23340 | NP_974595 | oxidoreductase  |
| PC596-1   | 229 | 44/75   | Arabidopsis thaliana | At5g06060 | NP_196225 | oxidoreductase  |
| PC596-2   | 231 | 31/36   | Petroselinum crispum |           | CAA34715  | Phenylalanine ammonia-lyase 1 (see 240-2)   |
| PC596-3   | 229 | 73/76   | Zea mays             |           | AAA65942  | TATA-binding protein  |
| PC596-4   | 229 | 73/76   | Zea mays             |           | AAA65942  | TATA-binding protein  |
| PC600-2-1 | 436 | 47/70   | Arabidopsis thaliana | At1g72960 | NP_177439 | nucleotide binding  |
| PC600-2-2 | 433 | 54/72   | Arabidopsis thaliana | At4g27720 | NP_567786 | unknown protein   |
| PC600-2-3 | 388 | 26/51   | Arabidopsis thaliana | At1g64650 | NP_176646 | unknown protein   |
| PC600-2-4 | 437 | 86/144  | Arabidopsis thaliana | At3g08970 | NP_187509 | heat shock protein binding / unfolded protein binding                                   |
| PC601-2-1 | 76  |         |                      |           |           | no significant similarity found   |
| PC601-2-2 | 396 |         |                      |           |           | no significant similarity found   |
| PC606-2   | 637 | 98/164  | Arabidopsis thaliana | At2g32900 | NP_565757 | ATZW10  |
| PC609-1   | 260 | 55/90   | Oryza sativa         |           | NP_922728 | unknown protein   |
| PC609-2   | 260 | 55/90   | Oryza sativa         |           | NP_922728 | unknown protein   |
| PC609-3   | 260 | 53/90   | Oryza sativa         |           | NP_922728 | unknown protein   |
| PC609-4   | 260 | 53/90   | Oryza sativa         |           | NP_922728 | unknown protein   |
| PC624-1   | 315 | 50/69   | Oryza sativa         |           | AAM91884  | putative receptor-like protein kinase   |
| PC624-2   | 303 | 20/24   | Petroselinum crispum |           | P14912    | 4-coumarate--CoA ligase (4Cl-1)   |
| PC624-4   | 312 | 15/20   | Arabidopsis thaliana | At5g67080 | NP_201509 | MAPKKK19 (see 628-1)  |
| PC628-1   | 313 | 15/20   | Arabidopsis thaliana | At5g67080 | NP_201509 | MAPKKK19 (see 624-4)  |
| PC628-2   | 253 | 34/57   | Catharanthus roseus  |           | AAB05871  | PAPS-reductase-like protein (see 625-3)   |
| PC628-3   | 340 | 100/113 | Arabidopsis thaliana | At5g01960 | NP_568096 | protein binding / ubiquitin-protein ligase/ zinc ion binding (see 336-1-1) (BUT 2x taq) |
| PC628-4   | 327 | 27/45   | Oryza sativa         |           | BAD01246  | putative MtN19 (see 604-2)  |
| PC638-1   | 294 | 15/51   | Azoarcus sp. EbN1    |           | CAI06685  | Biotin synthase protein (EC 2.8.1.6), gene: BIOB  |
| PC638-2   | 37  |         |                      |           |           | no significant similarity found   |
| PC638-3   | 242 | 57/65   | Daucus carota        |           | BAD24818  | cell attachment protein in somatic embryogenesis (BUT no taq)                           |
| PC638-4   | 289 |         |                      |           |           | no significant similarity found   |
| PC648-1   | 70  |         |                      |           |           | no significant similarity found   |

|           |      |        |                                 |           |             |   |
|-----------|------|--------|---------------------------------|-----------|-------------|---|
| PC648-2   | 70   |        |                                 |           |             | no significant similarity found   |
| PC648-3   | 70   |        |                                 |           |             | no significant similarity found   |
| PC648-4   | 70   |        |                                 |           |             | no significant similarity found   |
| PC649-1   | <409 | 75/101 | Arabidopsis thaliana            | At1g19270 | NP_173361   | zinc ion binding (BUT no taq)   |
| PC652-1   | 174  |        |                                 |           |             | no significant similarity found   |
| PC652-2   | 214  | 24/32  | Arabidopsis thaliana            | At3g21190 | NP_566677   | unknown protein   |
| PC652-3   | 185  | 56/60  | Helianthus annus                |           | CAC80371    | Acyl-ACP thioesterase   |
| PC652-4   | 174  |        |                                 |           |             | no significant similarity found   |
| PC660-1   | 116  | 29/37  | Arabidopsis thaliana            | At5g54370 | NP_200248   | unknown protein   |
| PC660-2   | 97   | 15/20  | Arabidopsis thaliana            | At4g27290 | NP_194459   | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC660-3   | 116  | 29/37  | Arabidopsis thaliana            | At5g54370 | NP_200248   | unknown protein   |
| PC660-4   | 116  | 29/37  | Arabidopsis thaliana            | At5g54370 | NP_200248   | unknown protein   |
| PC667-1   | 234  | 16/32  | Medicago truncatula             |           | ABE81445    | E-class P450, group I (BUT no taq)  |
| PC677-1   | 296  | 43/61  | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 684-1)  |
| PC677-2   | 148  | 29/37  | Arabidopsis thaliana            | At3g13610 | NP_187970   | oxidoreductase (see 724-3)  |
| PC678-1   | 140  |        |                                 |           |             | no significant similarity found   |
| PC678-2   | 140  |        |                                 |           |             | no significant similarity found   |
| PC678-3   | 142  | 25/39  | Arabidopsis thaliana            | At3g03530 | NP_566206   | NPC4 (NONSPECIFIC PHOSPHOLIPASE C4)   |
| PC678-4   | 146  | 15/16  | Arabidopsis thaliana            | At3g62290 | NP_191788   | GTP binding (see 735-1)   |
| PC683-1   | 125  | 24/40  | Arabidopsis thaliana            | At2g16650 | NP_179256   | unknown protein   |
| PC683-2   | 168  |        |                                 |           |             | no significant similarity found   |
| PC683-3   | 125  | 24/40  | Arabidopsis thaliana            | At2g16650 | NP_179256   | unknown protein   |
| PC683-4   | 152  | 39/45  | Arabidopsis thaliana            | At3g24290 | NP_189072   | ammonium transporter  |
| PC684-1   | 260  | 40/83  | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 685-2)  |
| PC684-2   | 258  | 29/41  | Vitis vinifera                  |           | CAC18730    | NADH glutamate dehydrogenase  |
| PC684-3   | 243  | 43/61  | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 685-2)  |
| PC684-4   | 257  | 44/61  | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 685-2)  |
| PC686-1   | 244  | 26/27  | Citrus x paradisi               |           | AAC67586    | pyrophosphate-dependent phosphofructokinase beta subunit  |
| PC686-2   | 186  | 38/61  | Citrus x paradisi               |           | AAN76362    | serpin-like protein   |
| PC686-3   | 244  | 35/47  | Panax ginseng                   |           | BAA96068    | 60S ribosomal protein L27a  |
| PC686-4   | 186  | 38/61  | Citrus x paradisi               |           | AAN76362    | serpin-like protein   |
| PC689-1   | 194  | 24/28  | Arabidopsis thaliana            | At4g32640 | NP_194990   | protein binding   |
| PC689-2   | 202  |        |                                 |           |             | no significant similarity found   |
| PC689-3   | 149  | 21/27  | Avicennia marina                |           | AAF01467    | enoyl-CoA-hydrolase   |
| PC689-4   | 207  | 34/51  | Asparagus officinalis           |           | BAB40323    | cytochrome P450   |
| PC691-1-1 | 246  | 42/56  | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 692-2)  |

|           |     |       |                                 |             |  |
|-----------|-----|-------|---------------------------------|-------------|--|
| PC691-1-2 | 241 | 22/32 | Paracoccus denitrificans PD1222 | ZP_00630616 | conserved hypothetical protein (see 692-2)                                       |
| PC691-1-3 | 161 |       |                                 |             | no significant similarity found  |
| PC691-1-4 | 147 | 41/44 | Gossypium hirsutum              | AAL93154    | bacterial-induced class III peroxidase (see 672-1) (BUT taq more than one copy)  |
| PC691-2-1 | 164 |       |                                 |             | no significant similarity found  |
| PC691-2-2 | 161 |       |                                 |             | no significant similarity found  |
| PC691-2-3 | 160 | 32/40 | Arabidopsis thaliana            | At3g62290   | GTP binding (see 735-1)  |
| PC691-2-4 | 163 |       |                                 |             | no significant similarity found  |
| PC692-2   | 172 | 15/24 | Paracoccus denitrificans PD1222 | ZP_00630616 | conserved hypothetical protein (see 677-1)                                       |
| PC692-3   | 234 | 15/24 | Paracoccus denitrificans PD1222 | ZP_00630616 | conserved hypothetical protein (see 677-1)                                       |
| PC692-4   | 233 | 15/24 | Paracoccus denitrificans PD1222 | ZP_00630616 | conserved hypothetical protein (see 677-1)                                       |
| PC696-1   | 202 | 60/66 | Arabidopsis thaliana            | At2g06990   | NP_565338<br>HUA enhancer 2 (HEN2)/DexH-box RNA helicase, putative               |
| PC696-2   | 197 |       |                                 |             | no significant similarity found  |
| PC696-3   | 200 | 57/65 | Arabidopsis thaliana            | At2g05840   | NP_178641<br>PAA2; endopeptidase/ peptidase/ threonine endopeptidase (see 697-1) |
| PC696-4   | 200 | 56/65 | Arabidopsis thaliana            | At2g05840   | NP_178641<br>PAA2; endopeptidase/ peptidase/ threonine endopeptidase (see 697-1) |
| PC697-1   | 200 | 56/65 | Arabidopsis thaliana            | At2g05840   | NP_178641<br>PAA2; endopeptidase/ peptidase/ threonine endopeptidase (see 696-3) |
| PC697-2   | 200 | 55/65 | Arabidopsis thaliana            | At2g05840   | NP_178641<br>PAA2; endopeptidase/ peptidase/ threonine endopeptidase (see 696-3) |
| PC697-3   | 200 | 56/65 | Arabidopsis thaliana            | At2g05840   | NP_178641<br>PAA2; endopeptidase/ peptidase/ threonine endopeptidase (see 696-3) |
| PC697-4   | 200 | 57/65 | Arabidopsis thaliana            | At2g05840   | NP_178641<br>PAA2; endopeptidase/ peptidase/ threonine endopeptidase (see 696-3) |
| PC704-1   | 130 | 21/41 | Arabidopsis thaliana            | At1g58807   | NP_683446<br>ATP binding   |
| PC704-2   | 130 | 16/36 | Arabidopsis thaliana            | At1g58807   | NP_683446<br>ATP binding   |
| PC704-3   | 130 | 20/41 | Arabidopsis thaliana            | At1g58807   | NP_683446<br>ATP binding   |
| PC713-1-1 | 143 |       |                                 |             | no significant similarity found  |
| PC713-1-2 | 202 | 27/38 | Gossypium hirsutum              | AAL93154    | bacterial-induced class III peroxidase (see 691-1-4)                             |
| PC713-1-3 | 143 |       |                                 |             | no significant similarity found  |
| PC713-1-4 | 202 | 15/29 | Nicotiana tabacum               | AAD47832    | cytochrome P450 (see 326-3)  |
| PC713-2-1 | 149 | 37/48 | Arabidopsis thaliana            | At3g13610   | NP_187970<br>oxidoreductase (see 685-1)  |
| PC713-2-2 | 149 | 37/48 | Arabidopsis thaliana            | At3g13610   | NP_187970<br>oxidoreductase (see 685-1)  |
| PC713-2-4 | 86  |       |                                 |             | no significant similarity found  |
| PC716-1   | 149 | 37/48 | Arabidopsis thaliana            | At3g13610   | NP_187970<br>oxidoreductase (see 685-1)  |
| PC716-2   | 149 | 36/48 | Arabidopsis thaliana            | At3g13610   | NP_187970<br>oxidoreductase (see 685-1)  |
| PC716-3   | 149 | 37/48 | Arabidopsis thaliana            | At3g13610   | NP_187970<br>oxidoreductase (see 685-1)  |
| PC716-4   | 149 | 36/47 | Arabidopsis thaliana            | At3g13610   | NP_187970<br>oxidoreductase (see 685-1)  |
| PC721-1   | 181 | 44/59 | Arabidopsis thaliana            | At2g20780   | NP_179671<br>carbohydrate transporter/ sugar porter (see 724-1)                  |
| PC721-2   | 181 | 44/59 | Arabidopsis thaliana            | At2g20780   | NP_179671<br>carbohydrate transporter/ sugar porter (see 724-1)                  |
| PC721-3   | 181 | 34/58 | Arabidopsis thaliana            | At2g20780   | NP_179671<br>carbohydrate transporter/ sugar porter (see 724-1)                  |
| PC721-4   | 201 | 58/66 | Linum usitatissimum             |             | AAB02926<br>peroxidase (see 672-3)   |

|         |     |       |                                  |           |           |  |
|---------|-----|-------|----------------------------------|-----------|-----------|--|
| PC723-1 | 152 | 41/50 | Arabidopsis thaliana             |           | AAL74193  | putative guanine nucleotide exchange factor                  |
| PC723-3 | 156 | 40/49 | Arabidopsis thaliana             |           | AAL74193  | putative guanine nucleotide exchange factor                  |
| PC723-4 | 151 | 40/49 | Arabidopsis thaliana             |           | AAL74193  | putative guanine nucleotide exchange factor                  |
| PC724-1 | 180 | 38/52 | Arabidopsis thaliana             | At2g20780 | NP_179671 | carbohydrate transporter/ sugar porter (see 721-1)           |
| PC724-2 | 149 | 33/33 | Arabidopsis thaliana             | At3g62290 | NP_191788 | GTP binding (see 735-1)                                      |
| PC724-3 | 149 | 37/48 | Arabidopsis thaliana             | At3g13610 | NP_187970 | oxidoreductase (see 685-1)                                   |
| PC726-1 | 129 | 34/43 | Arabidopsis thaliana             | At5g50850 | NP_199898 | pyruvate dehydrogenase (acetyl-transferring)                 |
| PC726-2 | 128 | 23/28 | Arabidopsis thaliana             | At5g50850 | NP_199898 | pyruvate dehydrogenase (acetyl-transferring)                 |
| PC726-3 | 129 | 38/43 | Arabidopsis thaliana             | At5g50850 | NP_199898 | pyruvate dehydrogenase (acetyl-transferring)                 |
| PC726-4 | 153 | 20/26 | Arabidopsis thaliana             | At3g49910 | NP_190560 | structural constituent of ribosome                           |
| PC729-1 | 128 | 31/31 | Arabidopsis thaliana             | At3g62290 | NP_191788 | GTP binding (see 735-1)                                      |
| PC729-2 | 128 | 30/31 | Arabidopsis thaliana             | At3g62290 | NP_191788 | GTP binding (see 735-1)                                      |
| PC729-3 | 128 | 31/31 | Arabidopsis thaliana             | At3g62290 | NP_191788 | GTP binding (see 735-1)                                      |
| PC730-2 | 144 |       |                                  |           |           | no significant similarity found                              |
| PC730-3 | 128 | 29/29 | Arabidopsis thaliana             | At3g62290 | NP_191788 | GTP binding (see 735-1)                                      |
| PC730-4 | 159 |       |                                  |           |           | no significant similarity found                              |
| PC738-1 | 243 | 28/71 | Corynebacterium efficiens YS 314 |           | NP_738153 | conserved hypothetical protein (see 665-2-2)                 |
| PC738-2 | 244 | 33/97 | Corynebacterium efficiens YS 314 |           | NP_738153 | conserved hypothetical protein (see 665-2-2)                 |
| PC738-3 | 249 | 46/53 | Arabidopsis thaliana             | At4g35260 | NP_195252 | IDH -1 (isocitrate dehydrogenase subunit 1) (NAD+ dependent) |
| PC738-4 | 244 | 36/97 | Corynebacterium efficiens YS 314 |           | NP_738153 | conserved hypothetical protein (see 665-2-2)                 |
| PC739-1 | 201 | 56/66 | Linum usitatissimum              |           | AAB02926  | peroxidase (see 722-2)                                       |
| PC739-2 | 201 | 56/66 | Linum usitatissimum              |           | AAB02926  | peroxidase (see 722-2)                                       |
| PC739-3 | 205 | 29/43 | Linum usitatissimum              |           | AAB02926  | peroxidase (see 722-2)                                       |
| PC740-1 | 150 | 16/31 |                                  |           |           | no significant similarity found                              |
| PC740-2 | 152 | 35/44 | Daucus carota                    |           | BAA03413  | EDGP precursor (see 763-4)                                   |
| PC740-3 | 150 | 31/38 | Arabidopsis thaliana             | At3g48990 | NP_190468 | AMP binding / catalytic (see 717-1)                          |
| PC740-4 | 153 |       |                                  |           |           | no significant similarity found                              |
| PC745-1 | 150 | 26/43 | Arachis hypogaea                 |           | AAA32676  | cationic peroxidase 2 precursor (PNPC2)                      |
| PC745-2 | 151 | 31/34 | Petroselinum crispum             |           | AAA33861  | Tyr-DC (see 312-1)   |
| PC745-4 | 44  |       |                                  |           |           | no significant similarity found                              |
| PC749-1 | 232 | 53/77 | Arabidopsis thaliana             | At4g13430 | NP_567405 | hydro-lyase/ lyase   |
| PC749-2 | 117 | 26/38 | Nicotiana tabacum                |           | BAA33810  | phi-1 (phosphate-induced) (see 748-4)                        |
| PC749-3 | 230 | 19/23 | Vicia faba                       |           | BAB17822  | vf 14-3-3 d protein  |
| PC749-4 | 231 | 44/61 | Arabidopsis thaliana             | At4g13430 | NP_567405 | hydro-lyase/ lyase   |
| PC750-1 | 208 | 32/66 | Daucus carota                    |           | BAB68539  | (S)-reticuline oxidase-like protein (see 397-1)              |
| PC750-2 | 207 | 27/55 | Daucus carota                    |           | BAB68539  | (S)-reticuline oxidase-like protein (see 397-1)              |

|         |     |       |                          |           |             |   |
|---------|-----|-------|--------------------------|-----------|-------------|---|
| PC750-3 | 117 | 21/26 | Prunus armeniaca         |           | Q9XF97      | 60 S ribosomal protein L4 (L1)  |
| PC751-1 | 175 | 33/43 | Scutellaria baicalensis  |           | BAA77388    | peroxidase 2  |
| PC751-2 | 209 | 23/48 | Daucus carota            |           | BAB68539    | (S)-reticuline oxidase-like protein (see 397-1)<br>no significant similarity found              |
| PC751-4 | 175 |       |                          |           |             |   |
| PC754-1 | 110 | 23/34 | Arabidopsis thaliana     | At1g66860 | NP_564885   | expressed protein   |
| PC754-2 | 194 | 31/37 | Arabidopsis thaliana     | At2g21390 | NP_179734   | coatomer alpha subunit  |
| PC754-3 | 109 |       |                          |           |             | no significant similarity found   |
| PC754-4 | 111 | 29/36 | Arabidopsis thaliana     | At2g21390 | NP_179734   | coatomer alpha subunit  |
| PC755-1 | 117 | 26/38 | Nicotiana tabacum        |           | BAA33810    | phi-1 (phosphate-induced) (see 748-4)   |
| PC755-2 | 104 |       |                          |           |             | no significant similarity found   |
| PC755-3 | 106 |       |                          |           |             | no significant similarity found   |
| PC756-1 | 80  |       |                          |           |             | no significant similarity found   |
| PC756-2 | 80  |       |                          |           |             | no significant similarity found   |
| PC762-1 | 233 |       |                          |           |             | no significant similarity found   |
| PC762-3 | 69  |       |                          |           |             | no significant similarity found   |
| PC762-4 | 231 | 33/74 | Daucus carota            |           | BAB68539    | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC768-1 | 198 | 45/48 | Prunus armeniaca         |           | O81363      | 40 S ribosomal protein S4   |
| PC768-3 | 332 |       |                          |           |             | no significant similarity found   |
| PC769-1 | 228 | 43/69 | Arabidopsis thaliana     | At2g46420 | NP_566074   | unknown protein   |
| PC769-3 | 110 | 13/23 | Gentiana triflora        |           | BAA93452    | acyltransferase homolog   |
| PC769-4 | 217 | 43/48 | Oryza sativa             |           | NP_922520   | hypothetical protein  |
| PC770-1 | 98  | 17/32 | Arabidopsis thaliana     | At2g24180 | NP_179995   | CYP71B6 (CYTOCHROME P450 71B6); heme binding / iron ion binding / monooxygenase/ oxygen binding |
| PC770-2 | 97  | 14/20 | Arabidopsis thaliana     | At4g11410 | NP_192880   | oxidoreductase (see 782-4)  |
| PC773-1 | 229 | 26/37 | Arabidopsis thaliana     | At2g31060 | NP_180664   | GTP binding / translation elongation factor   |
| PC773-2 | 229 | 32/58 | Nicotiana tabacum        |           | CAC12822    | AP2 domain-containing transcription factor (ethylene response)                                  |
| PC773-4 | 232 | 29/53 | Trichodesmium erythraeum |           | ZP_00074911 | 3-isopropylmalate dehydratase large subunit   |
| PC774-1 | 38  |       |                          |           |             | no significant similarity found   |
| PC774-2 | 225 | 36/53 | Arabidopsis thaliana     | At2g39170 | NP_181450   | unknown protein   |
| PC774-3 | 238 | 21/38 | Arabidopsis thaliana     | At3g26040 | NP_189233   | acyltransferase-like protein (see 283-2)  |
| PC774-4 | 220 | 33/54 | Arabidopsis thaliana     | At4g04410 | CAB77909    | putative polyprotein  |
| PC779-1 | 245 | 54/60 | Arabidopsis thaliana     | At3g54540 | NP_567001   | ATGCN4  |
| PC779-2 | 246 | 72/81 | Arabidopsis thaliana     | At3g54540 | NP_567001   | ATGCN4  |
| PC779-3 | 120 |       |                          |           |             | no significant similarity found   |
| PC779-4 | 247 |       |                          |           |             | no significant similarity found   |
| PC784-1 | 90  | 20/27 | Lactuca sativa           |           | AAL77102    | carbohydrate oxidase  |
| PC784-2 | 45  |       |                          |           |             | no significant similarity found   |

|         |     |        |                      |           |           |  |
|---------|-----|--------|----------------------|-----------|-----------|--|
| PC784-3 | 90  | 22/28  | Lactuca sativa       |           | AAL77102  | carbohydrate oxidase                                     |
| PC784-4 | 90  | 22/28  | Lactuca sativa       |           | AAL77102  | carbohydrate oxidase                                     |
| PC786-1 | 356 | 79/118 | Solanum tuberosum    |           | AAP84703  | putative xyloglucanase inhibitor (see 787-1)             |
| PC786-2 | 353 | 66/72  | Solanum tuberosum    |           | AAK84008  | beta-amylase PCT-BMYI (see 604-1)                        |
| PC786-3 | 356 | 85/118 | Solanum tuberosum    |           | AAP84703  | putative xyloglucanase inhibitor (see 787-1)             |
| PC786-4 | 356 | 42/54  | Arabidopsis thaliana | At2g26190 | NP_565618 | calmodulin binding (see 787-2)                           |
| PC787-1 | 356 | 88/118 | Solanum tuberosum    |           | AAP84703  | putative xyloglucanase inhibitor (see 786-1)             |
| PC787-2 | 358 | 81/110 | Arabidopsis thaliana | At2g26190 | NP_565618 | calmodulin binding (see 278-2)                           |
| PC787-3 | 356 | 81/118 | Solanum tuberosum    |           | AAP84703  | putative xyloglucanase inhibitor (see 786-1)             |
| PC787-4 | 356 | 82/118 | Solanum tuberosum    |           | AAP84703  | putative xyloglucanase inhibitor (see 786-1)             |
| PC793-2 | 229 | 35/49  | Arabidopsis thaliana | At4g13930 | NP_193129 | SHM4 (SERINE HYDROXYMETHYLTRANSFERASE 4)                 |
| PC793-4 | 230 | 35/78  | Arabidopsis thaliana | At4g22030 | NP_193934 | F-box protein family (see 347-2)                         |
| PC799-1 | 249 | 40/78  | Ipomoea trifida      |           | AAA97903  | secreted glycoprotein 3                                  |
| PC799-2 | 249 | 39/80  | Ipomoea trifida      |           | AAA97903  | secreted glycoprotein 3                                  |
| PC799-3 | 249 | 40/78  | Ipomoea trifida      |           | AAA97903  | secreted glycoprotein 3                                  |
| PC799-4 | 252 | 24/41  | Arabidopsis thaliana | At1g19720 | NP_173402 | unknown protein  |
| PC801-2 | 114 | 19/29  | Arabidopsis thaliana | At1g12550 | NP_172716 | oxidoreductase family (see pc802-3)                      |
| PC801-3 | 114 | 19/29  | Arabidopsis thaliana | At1g12550 | NP_172716 | oxidoreductase family (see pc802-3)                      |
| PC801-4 | 116 | 26/37  | Arabidopsis thaliana | At3g47940 | NP_190377 | putative heat shock protein                              |
| PC802-1 | 108 | 14/19  | Zea mays             |           | CAC21393  | peroxidase   |
| PC802-3 | 114 | 19/29  | Arabidopsis thaliana | At1g12550 | NP_172716 | oxidoreductase family (see 801-2)                        |
| PC802-4 | 108 | 14/19  | Zea mays             |           | CAC21393  | peroxidase   |
| PC803-1 | 114 | 19/29  | Arabidopsis thaliana | At1g12550 | NP_172716 | oxidoreductase family (see 801-2)                        |
| PC803-2 | 114 | 18/29  | Arabidopsis thaliana | At1g12550 | NP_172716 | oxidoreductase family (see 801-2)                        |
| PC803-3 | 110 | 34/36  | Arabidopsis thaliana | At3g43240 | AAQ82841  | unknown protein  |
| PC803-4 | 94  |        |                      |           |           | no significant similarity found                          |
| PC809-1 | 126 | 34/41  | Arabidopsis thaliana | At3g22750 | NP_566716 | putative protein kinase                                  |
| PC809-2 | 126 | 39/41  | Arabidopsis thaliana | At3g22750 | NP_566716 | putative protein kinase                                  |
| PC809-3 | 99  | 15/24  | Arabidopsis thaliana |           | BAB03027  | glutamine-fructose-6-phosphate transaminase 2            |
| PC809-4 | 125 | 27/29  | Arabidopsis thaliana | At3g22750 | NP_566716 | putative protein kinase                                  |
| PC810-1 | 91  | 24/30  | Arabidopsis thaliana | At5g56120 | NP_200423 | expressed protein  |
| PC810-2 | 89  |        |                      |           |           | no significant similarity found                          |
| PC810-3 | 72  | 16/23  | Arabidopsis thaliana | At2g45560 | NP_850439 | CYP76C1; heme binding / iron ion binding / monooxygenase |
| PC810-4 | 90  | 22/28  | Lactuca sativa       |           | AAL77102  | carbohydrate oxidase (see 784)                           |
| PC811-1 | 468 | 88/139 | Oryza sativa         |           | NP_914373 | unknown protein  |
| PC811-2 | 468 | 89/139 | Oryza sativa         |           | NP_914373 | unknown protein  |

|         |     |        |                      |           |           |  |
|---------|-----|--------|----------------------|-----------|-----------|--|
| PC811-3 | 140 | 34/39  | Arabidopsis thaliana | At2g01600 | NP_565267 | expressed protein (see 758-1)  |
| PC811-4 | 443 | 64/104 | Arabidopsis thaliana | At4g12650 | NP_193002 | transporter  |
| PC814-2 | 232 | 17/18  | Arabidopsis thaliana | At5g14310 | NP_568298 | unknown protein  |
| PC814-3 | 230 | 51/94  | Arabidopsis thaliana | At3g52120 | NP_566957 | RNA binding / nucleic acid binding   |
| PC814-4 | 233 | 44/63  | Arabidopsis thaliana | At3g52120 | NP_566957 | RNA binding / nucleic acid binding   |
| PC817-1 | 170 | 16/25  | Arabidopsis thaliana | At3g14870 | NP_188105 | unknown protein  |
| PC817-2 | 173 | 24/25  | Arabidopsis thaliana | At1g02780 | NP_171777 | EMB2386 (see 396-2)  |
| PC817-3 | 171 | 24/25  | Arabidopsis thaliana | At1g02780 | NP_171777 | EMB2386 (see 396-2)  |
| PC821-1 | 70  |        |                      |           |           | no significant similarity found  |
| PC821-3 | 72  |        |                      |           |           | no significant similarity found  |
| PC821-4 | 72  |        |                      |           |           | no significant similarity found  |
| PC825-1 | 243 | 17/38  | Homo sapiens         |           | NP_056305 | S. cerevisiae SEC31-like 2 isoform a   |
| PC825-3 | 248 | 27/35  | Allium cepa          |           | AAF18998  | ATP-sulfurylase  |
| PC825-4 | 243 | 17/36  | Arabidopsis thaliana | At5g17970 | NP_197298 | ATP binding / nucleoside-triphosphatase/ nucleotide binding / transmembrane receptor |
| PC827-1 | 224 | 56/74  | Oryza sativa         |           | AAM97165  | putative oxysterol binding protein   |
| PC827-3 | 234 | 31/50  | Medicago truncatula  |           | CAF02075  | GDP dissociation inhibitor   |
| PC827-4 | 150 |        |                      |           |           | no significant similarity found  |
| PC829-3 | 168 |        |                      |           |           | no significant similarity found  |
| PC829-4 | 176 | 26/57  | Nicotiana tabacum    |           | AAF98369  | patatin-like protein 3 (see 521-1-1)   |
| PC835-1 | 230 | 45/90  | Arabidopsis thaliana | At1g72750 | NP_177419 | inner mitochondrial membrane protein   |
| PC835-2 | 242 |        |                      |           |           | no significant similarity found  |
| PC835-3 | 230 | 49/90  | Arabidopsis thaliana | At1g72750 | NP_177419 | inner mitochondrial membrane protein   |

Zusätzliche Informationen zur Dissertation von Yvonne Gäbler, 2007

**Tabelle 7-39: Liste von Genen, deren Expression durch Pep13-, HrpZ<sub>Psp</sub>-, NLP<sub>Pp</sub>- und LPS-Behandlung nach 1 und 4 h induziert wird.**  
cDNA-AFLP-Analyse in Petersilie, Fragmente pc251-pc837.

| Klon    | Länge [bp] | BlastX [AS/AS] | Organismus           | AGI Code  | Accession-nummer | Protein/Mögliche Funktion  |
|---------|------------|----------------|----------------------|-----------|------------------|--|
| PC262-1 | 212        | 29/34          | Arabidopsis thaliana | At4g24190 | NP_974606        | SHD (SHEPHERD)   |
| PC262-2 | 208        |                |                      |           |                  | no significant similarity found  |
| PC262-3 | 203        | 48/52          | Arabidopsis thaliana | At2g01350 | NP_565259        | nicotinate-nucleotide diphosphorylase (carboxylating)                    |
| PC262-4 | 206        | 34/68          | Oryza sativa         |           | BAC79712         | Putative NADPH HC toxin reductase  |
| PC288-1 | 278        |                |                      |           |                  | no significant similarity found  |
| PC288-2 | 272        | 47/61          | Arabidopsis thaliana | At2g28310 | NP_850118        | unknown protein  |
| PC288-3 | 278        |                |                      |           |                  | no significant similarity found  |
| PC288-4 | 271        | 79/89          | Oryza sativa         |           | NP_915679        | putative ammonium transporter  |
| PC301-1 | 210        | 52/57          | Arabidopsis thaliana | At1g31930 | NP_174475        | extra-large guanine nucleotide binding protein, putative                 |
| PC301-2 | 213        | 14/21          | Arabidopsis thaliana | At5g43580 | NP_199171        | serine-type endopeptidase inhibitor (see 266-3)                          |
| PC301-4 | 213        | 51/26          | Daucus carota        |           | BAD24818         | cell attachment protein in somatic embryogenesis (see 372-3)             |
| PC310-1 | 301        | 43/85          | Arabidopsis thaliana | At1g72310 | NP_177375        | ATL3   |
| PC310-2 | 271        | 68/69          | Petroselinum crispum |           | AAA33861         | Tyrosin-Decarboxylase (see 312-1)  |
| PC310-3 | 280        | 49/88          | Arabidopsis thaliana | At1g26420 | NP_173966        | electron carrier (see 432-3)   |
| PC310-4 | 299        | 53/98          | Arabidopsis thaliana | At1g26420 | NP_173966        | electron carrier (see 432-3)   |
| PC323-1 | 152        | 37/49          | Arabidopsis thaliana | At3g57400 | NP_191299        | unknown protein  |
| PC323-2 | 154        | 19/21          | Arabidopsis thaliana | At2g05710 | NP_178634        | RNA binding / aconitate hydratase/ hydro-lyase/ iron ion binding / lyase |
| PC323-3 | 153        |                |                      |           |                  | no significant similarity found  |
| PC323-4 | 152        | 37/49          | Arabidopsis thaliana | At3g57400 | NP_191299        | unknown protein  |
| PC328-1 | 250        | 58/73          | Arabidopsis thaliana | At5g66140 | NP_201415        | PAD2   |
| PC328-2 | 257        | 39/74          | Arabidopsis thaliana | At5g66140 | NP_201415        | PAD2   |
| PC328-3 | 250        | 39/52          | Arabidopsis thaliana | At5g66140 | NP_201415        | PAD2   |
| PC328-4 | 262        |                |                      |           |                  | no significant similarity found  |
| PC330-1 | 205        | 48/68          | Arabidopsis thaliana | At4g37120 | NP_568017        | SMP2   |
| PC330-2 | 205        | 48/68          | Arabidopsis thaliana | At4g37120 | NP_568017        | SMP2   |
| PC330-3 | 205        | 48/68          | Arabidopsis thaliana | At4g37120 | NP_568017        | SMP2   |
| PC330-4 | 197        |                |                      |           |                  | no significant similarity found  |

|         |     |         |                            |           |           |   |
|---------|-----|---------|----------------------------|-----------|-----------|---|
| PC347-1 | 376 | 107/123 | Arabidopsis thaliana       | At1g70290 | NP_177186 | ATTPS8  |
| PC347-2 | 380 | 51/113  | Arabidopsis thaliana       | At4g22030 | NP_193934 | F-box protein family (see 796-4)  |
| PC347-3 | 376 | 89/113  | Daucus carota              |           | BAA03413  | EDGP precursor (see 763-4)  |
| PC347-4 | 376 | 110/123 | Arabidopsis thaliana       | At1g70290 | NP_177186 | trehalose-phosphate synthase [UDP-forming]  |
| PC349-1 | 208 | 19/59   | Arabidopsis thaliana       | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC349-2 | 210 | 17/35   | Arabidopsis thaliana       | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC349-3 | 211 | 31/63   | Arabidopsis thaliana       | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC349-4 | 210 | 23/59   | Arabidopsis thaliana       | At4g27290 | NP_194459 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase/ sugar binding (see 654) |
| PC357-1 | 262 | 40/66   | Populus alba               |           | BAE16616  | peroxidase  |
| PC357-2 | 277 |         |                            |           |           | no significant similarity found   |
| PC357-3 | 262 | 41/62   | Populus alba               |           | BAE16616  | peroxidase  |
| PC357-4 | 263 | 59/79   | Populus alba               |           | BAE16616  | peroxidase  |
| PC372-2 | 295 | 32/39   | Arabidopsis thaliana       | At2g26600 | NP_565627 | hydrolase, hydrolyzing O-glycosyl compounds   |
| PC372-3 | 243 | 26/67   | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 375-1)  |
| PC372-4 | 292 | 49/79   | Nicotiana tabacum          |           | NP_196153 | peroxidase (see 107-1-4)  |
| PC373-1 | 70  |         |                            |           |           | no significant similarity found   |
| PC373-2 | 256 | 38/66   | Arabidopsis thaliana       | At4g00400 | NP_191950 | acyltransferase   |
| PC373-3 | 278 | 53/92   | Arabidopsis thaliana       | At1g50200 | NP_175439 | ALATS (ALANYL-TRNA SYNTHETASE)  |
| PC373-4 | 279 | 52/83   | Arabidopsis thaliana       | At1g50200 | NP_175439 | ALATS (ALANYL-TRNA SYNTHETASE)  |
| PC375-1 | 244 | 71/80   | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 638-3)  |
| PC375-2 | 244 | 71/80   | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 638-3)  |
| PC375-4 | 244 | 71/80   | Daucus carota              |           | BAD24818  | cell attachment protein in somatic embryogenesis (see 638-3)  |
| PC381-2 | 194 | 21/69   | Shewanella oneidensis MR 1 |           | NP_717426 | conserved hypothetical protein  |
| PC381-3 | 191 |         |                            |           |           | no significant similarity found   |
| PC381-4 | 194 | 39/69   | Arabidopsis thaliana       | At2g46900 | NP_566090 | unknown protein   |
| PC383-1 | 220 |         |                            |           |           | no significant similarity found   |
| PC383-2 | 216 |         |                            |           |           | no significant similarity found   |
| PC383-3 | 220 |         |                            |           |           | no significant similarity found   |
| PC383-4 | 220 |         |                            |           |           | no significant similarity found   |
| PC389-1 | 95  | 30/30   | Petroselinum crispum       |           | AAG35658  | WRKY4 (see 508-4)   |
| PC389-2 | 94  | 30/30   | Petroselinum crispum       |           | AAG35658  | WRKY4 (see 508-4)   |
| PC389-3 | 94  | 30/30   | Petroselinum crispum       |           | AAG35658  | WRKY4 (see 508-4)   |
| PC390-1 | 232 | 32/74   | Daucus carota              |           | BAB68539  | (S)-reticuline oxidase-like protein (see 397-1)   |
| PC390-4 | 27  |         |                            |           |           | no significant similarity found   |
| PC413-1 | 300 | 94/99   | Daucus carota              |           | BAD16685  | plasma membrane H+-ATPase   |
| PC413-2 | 300 | 94/99   | Daucus carota              |           | BAD16685  | plasma membrane H+-ATPase   |

|           |     |        |                      |           |           |   |
|-----------|-----|--------|----------------------|-----------|-----------|---|
| PC413-3   | 300 | 94/99  | Daucus carota        |           | BAD16685  | plasma membrane H+-ATPase   |
| PC413-4   | 300 | 94/99  | Daucus carota        |           | BAD16685  | plasma membrane H+-ATPase   |
| PC414-1-1 | 266 | 34/70  | Arabidopsis thaliana | At2g05080 | NP_178583 | putative helicase (see 414-2-1)                                     |
| PC414-1-2 | 268 | 54/68  | Arabidopsis thaliana | At5g39610 | NP_198777 | ANAC092; transcription factor                                       |
| PC414-1-3 | 266 | 34/70  | Arabidopsis thaliana | At2g05080 | NP_178583 | putative helicase (see 414-2-1)                                     |
| PC414-1-4 | 269 | 74/89  | Arabidopsis thaliana | At5g39610 | NP_198777 | ANAC092; transcription factor                                       |
| PC414-2-1 | 265 | 34/70  | Arabidopsis thaliana | At2g05080 | NP_178583 | putative helicase (see 414-1-1)                                     |
| PC414-2-2 | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 416-1)                 |
| PC414-2-3 | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 416-1)                 |
| PC414-2-4 | 70  | 18/22  | Oryza sativa         |           | BAD82381  | putative S-receptor kinase (see 412-3)                              |
| PC416-1   | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 414-2)                 |
| PC416-2   | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 414-2)                 |
| PC416-3   | 139 | 35/44  | Arabidopsis thaliana | At5g10960 | NP_196657 | ribonuclease/ transcriptional repressor (see 414-2)                 |
| PC417-1   | 107 | 15/20  | Arabidopsis thaliana | At1g23740 | NP_173786 | oxidoreductase/ zinc ion binding (see 210-3)                        |
| PC417-2   | 107 |        |                      |           |           | no significant similarity found                                     |
| PC417-3   | 142 | 28/46  | Oryza sativa         |           | AAN39049  | putative phosphate transporter OsPT8                                |
| PC417-4   | 109 | 22/41  | Arabidopsis thaliana | At5g01820 | NP_195802 | ATSR1 (SERINE/THREONINE PROTEIN KINASE 1)                           |
| PC418-1   | 69  |        |                      |           |           | no significant similarity found                                     |
| PC418-2   | 68  |        |                      |           |           | no significant similarity found                                     |
| PC418-3   | 69  |        |                      |           |           | no significant similarity found                                     |
| PC418-4   | 69  |        |                      |           |           | no significant similarity found                                     |
| PC427-1   | 98  |        |                      |           |           | no significant similarity found                                     |
| PC427-2   | 97  |        |                      |           |           | no significant similarity found                                     |
| PC427-3   | 97  |        |                      |           |           | no significant similarity found                                     |
| PC427-4   | 96  |        |                      |           |           | no significant similarity found                                     |
| PC431-1   | 290 | 33/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC431-2   | 290 | 35/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC431-3   | 290 | 35/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC431-4   | 292 | 33/118 | Arabidopsis thaliana | At1g19180 | NP_564075 | unknown protein   |
| PC432-2   | 83  | 24/27  | Arabidopsis thaliana | At5g40010 | NP_198817 | ATP binding / ATPase/ nucleoside-triphosphatase/ nucleotide binding |
| PC432-3   | 119 | 20/39  | Arabidopsis thaliana | At1g26420 | NP_173966 | electron carrier (see 310-3)  |
| PC432-4   | 225 | 57/74  | Arabidopsis thaliana | At5g61780 | NP_200986 | nuclease/ nucleic acid binding                                      |
| PC433-1   | 187 | 13/37  | Apis mellifera       |           | XP_624744 | PREDICTED: similar to dysfusion CG32474-PA                          |
| PC433-2   | 187 | 13/37  | Apis mellifera       |           | XP_624744 | PREDICTED: similar to dysfusion CG32474-PA                          |
| PC433-3   | 187 | 13/37  | Apis mellifera       |           | XP_624744 | PREDICTED: similar to dysfusion CG32474-PA                          |
| PC442-1   | 47  |        |                      |           |           | no significant similarity found                                     |

|         |     |       |                           |           |                       |   |
|---------|-----|-------|---------------------------|-----------|-----------------------|---|
| PC442-2 | 44  |       |                           |           |                       | no significant similarity found   |
| PC442-4 | 47  |       |                           |           |                       | no significant similarity found   |
| PC451-1 | 358 | 43/77 | Arabidopsis thaliana      | At2g32850 | NP_850199<br>AAD47832 | ATP binding / protein kinase/ protein serine/threonine kinase/ protein-tyrosine kinase<br>cytochrome P450 (see 326-3) |
| PC451-3 | 130 | 19/42 | Nicotiana tabacum         |           |                       |   |
| PC452-1 | 217 | 47/66 | Arabidopsis thaliana      | At1g34340 | NP_174694             | catalytic   |
| PC452-2 | 219 | 47/66 | Arabidopsis thaliana      | At1g34340 | NP_174694             | catalytic   |
| PC452-3 | 216 | 27/46 | Arabidopsis thaliana      | At1g34340 | NP_174694             | catalytic   |
| PC452-4 | 218 | 47/66 | Arabidopsis thaliana      | At1g34340 | NP_174694             | catalytic   |
| PC454-1 | 75  | 18/21 | Arabidopsis thaliana      | At2g47610 | NP_182283             | structural constituent of ribosome  |
| PC454-2 | 107 | 13/19 | Arabidopsis thaliana      | At3g27080 | NP_189344<br>AAD47832 | TOM20-3<br>cytochrome P450 (see 326-3)  |
| PC454-3 | 129 | 18/40 | Nicotiana tabacum         |           |                       |   |
| PC455-1 | 260 |       |                           |           |                       | no significant similarity found   |
| PC455-2 | 254 | 24/58 | Arabidopsis thaliana      | At5g40720 | NP_198888             | unknown protein (see 456-1)   |
| PC455-3 | 256 |       |                           |           |                       | no significant similarity found   |
| PC456-1 | 255 | 28/82 | Arabidopsis thaliana      | At5g40720 | NP_198888             | unknown protein (see 455-2)   |
| PC456-3 | 257 | 18/31 | Arabidopsis thaliana      | At5g01710 | NP_195791             | unknown protein   |
| PC456-4 | 255 | 30/82 | Arabidopsis thaliana      | At5g40720 | NP_198888             | unknown protein (see 455-2)   |
| PC461-1 | 147 | 22/28 | Arabidopsis thaliana      | At2g02960 | NP_178396             | protein binding / ubiquitin-protein ligase/ zinc ion binding(see 569-1)   |
| PC461-2 | 139 | 24/37 | Arabidopsis thaliana      | At3g06250 | NP_566278             | unknown protein   |
| PC461-3 | 120 | 29/33 | Arabidopsis thaliana      | At1g62020 | NP_176393             | protein transporter/ transporter  |
| PC461-4 | 131 | 20/35 | Arabidopsis thaliana      | At2g46150 | NP_182138             | unknown protein (see 470-1)   |
| PC473-1 | 217 | 30/37 | Petroselinum crispum      |           | AAA98491              | anionic peroxidase (see 261-1)  |
| PC473-2 | 260 | 14/33 | Oryza sativa              |           | AAO72375              | putative RNA helicase (see 1-2)   |
| PC478-1 | 252 |       |                           |           |                       | no significant similarity found   |
| PC478-2 | 252 | 19/33 | Glycine max               |           | AAX56086              | homogentisate phytolprenyltransferase   |
| PC478-3 | 237 | 51/78 | Nicotiana plumbaginifolia |           | CAC40990              | ABC 1 protein   |
| PC478-4 | 252 | 19/33 | Glycine max               |           | AAX56086              | homogentisate phytolprenyltransferase   |
| PC482-1 | 332 | 42/55 | Arabidopsis thaliana      | At4g18670 | NP_193602             | protein binding (BUT no apo)  |
| PC482-2 | 340 | 30/67 | Arabidopsis thaliana      | At4g33920 | NP_195118             | catalytic/ protein phosphatase type 2C (BUT no apo)   |
| PC482-3 | 285 |       |                           |           |                       | no significant similarity found (BUT no apo)  |
| PC482-4 | 45  |       |                           |           |                       | no significant similarity found   |
| PC489-1 | 229 | 39/73 | Arabidopsis thaliana      | At1g22360 | NP_173653             | AT2 (see 488-4)   |
| PC489-2 | 289 | 25/52 | Daucus carota             |           | AAA98927              | EP4b  |
| PC489-3 | 285 | 34/73 | Glycine max               |           | AAN12272              | subtilisin-like protein C1 (see 608-1)  |
| PC489-4 | 285 | 82/94 | Arabidopsis thaliana      | At3g62860 | NP_191845             | catalytic/ hydrolase (see 608-4)  |
| PC494-1 | 153 | 19/19 | Oryza sativa              |           | AAX95352              | dnaK-type molecular chaperone hsp70   |

|           |     |       |                                   |           |           |  |
|-----------|-----|-------|-----------------------------------|-----------|-----------|--|
| PC494-2   | 158 |       |                                   |           |           | no significant similarity found  |
| PC494-3   | 153 | 20/33 | Oryza sativa                      |           | AAX95352  | dnaK-type molecular chaperone hsp70                                      |
| PC519-1-1 | 366 | 17/30 | Arabidopsis thaliana              | At2g36220 | NP_565838 | unknown protein  |
| PC519-1-3 | 376 | 30/65 | Arabidopsis thaliana              | At2g23740 | NP_179954 | nucleic acid binding / transcription factor/ zinc ion binding            |
| PC519-1-4 | 354 | 23/70 | Verminephrobacter eiseniae EF01 2 |           | EAT71611  | glycosyl transferase, family 2   |
| PC519-2-1 | 251 | 21/46 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 529-3)  |
| PC519-2-2 | 248 | 25/64 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 529-3)  |
| PC519-2-3 | 246 | 28/69 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3  |
| PC519-2-4 | 243 | 20/36 | Oryza sativa                      |           | BAD24983  | putative uclacyanin 3 (see 529-3)  |
| PC523-1   | 87  | 14/21 | Arabidopsis thaliana              | At3g48410 | NP_190412 | catalytic/ hydrolase   |
| PC523-2   | 247 | 71/77 | Prunus persica                    |           | CAB69824  | H+-exporting ATPase (EC 3.6.3.6), plasmamembrane                         |
| PC523-3   | 244 | 28/34 | Nicotiana tabacum                 |           | BAB92011  | pleiotropic drug resistance (PDR) like protein (see 812-2)               |
| PC523-4   | 91  | 23/29 | Arabidopsis thaliana              | At5g51950 | NP_200008 | FAD binding / aldehyde-lyase/ oxidoreductase (see 526-1)                 |
| PC527-1   | 148 | 27/49 | Arabidopsis thaliana              | At5g25930 | NP_197965 | receptor related protein kinase-like (LRR)                               |
| PC527-2   | 147 | 10/18 | Aedes aegypti                     |           | EAT48670  | acyl-CoA oxidase   |
| PC527-3   | 148 | 27/49 | Arabidopsis thaliana              | At5g25930 | NP_197965 | receptor related protein kinase-like (LRR)                               |
| PC527-4   | 148 | 22/34 | Medicago sativa                   |           | CAB54847  | hydroperoxide lyase  |
| PC532-1-1 | 79  |       |                                   |           |           | no significant similarity found  |
| PC532-1-2 | 90  |       |                                   |           |           | no significant similarity found  |
| PC532-1-3 | 79  |       |                                   |           |           | no significant similarity found  |
| PC532-1-4 | 139 | 23/46 | Arabidopsis thaliana              | At2g36090 | NP_181153 | unknown protein (see 533-1-1)  |
| PC532-2-1 | 64  |       |                                   |           |           | no significant similarity found  |
| PC532-2-2 | 90  |       |                                   |           |           | no significant similarity found  |
| PC532-2-3 | 91  |       |                                   |           |           | no significant similarity found  |
| PC532-2-4 | 65  |       |                                   |           |           | no significant similarity found  |
| PC542-1   | 76  |       |                                   |           |           | no significant similarity found  |
| PC542-2   | 74  |       |                                   |           |           | no significant similarity found  |
| PC542-3   | 72  |       |                                   |           |           | no significant similarity found  |
| PC542-4   | 76  |       |                                   |           |           | no significant similarity found  |
| PC555-1   | 112 |       |                                   |           |           | no significant similarity found  |
| PC555-2   | 130 | 23/44 | Arabidopsis thaliana              | At3g15980 | NP_188219 | protein transporter  |
| PC555-4   | 102 |       |                                   |           |           | no significant similarity found  |
| PC569-1   | 209 | 47/70 | Arabidopsis thaliana              | At2g02960 | NP_178396 | protein binding / ubiquitin-protein ligase/ zinc ion binding (see 300-1) |
| PC569-2   | 152 | 30/47 | Arabidopsis thaliana              | At3g62260 | NP_191785 | catalytic/ protein phosphatase type 2C (see 300-2)                       |
| PC569-4   | 209 | 43/69 | Glycine max                       |           | ABC68405  | cytochrome P450 monooxygenase CYP72A68                                   |
| PC575-1   | 129 | 41/43 | Arabidopsis thaliana              | At1g09430 | NP_172414 | ACLA-3   |

|           |      |         |                                 |           |             |   |
|-----------|------|---------|---------------------------------|-----------|-------------|---|
| PC575-2   | 570  | 82/124  | Lycopersicon esculentum         |           | AAF22236    | Pirin   |
| PC575-3   | 137  | 16/22   | Solanum tuberosum               |           | AAA81891    | probable epoxide hydrolase (EC 3.3.2.3)   |
| PC575-4   | 562  | 85/124  | Lycopersicon esculentum         |           | AAF22236    | Pirin   |
| PC596-1   | 229  | 44/75   | Arabidopsis thaliana            | At5g06060 | NP_196225   | oxidoreductase  |
| PC596-2   | 231  | 31/36   | Petroselinum crispum            |           | CAA34715    | Phenylalanine ammonia-lyase 1 (see 240-2)   |
| PC596-3   | 229  | 73/76   | Zea mays                        |           | AAA65942    | TATA-binding protein  |
| PC596-4   | 229  | 73/76   | Zea mays                        |           | AAA65942    | TATA-binding protein  |
| PC601-2-1 | 76   |         |                                 |           |             | no significant similarity found   |
| PC601-2-2 | 396  |         |                                 |           |             | no significant similarity found   |
| PC609-1   | 260  | 55/90   | Oryza sativa                    |           | NP_922728   | unknown protein   |
| PC609-2   | 260  | 55/90   | Oryza sativa                    |           | NP_922728   | unknown protein   |
| PC609-3   | 260  | 53/90   | Oryza sativa                    |           | NP_922728   | unknown protein   |
| PC609-4   | 260  | 53/90   | Oryza sativa                    |           | NP_922728   | unknown protein   |
| PC628-1   | 313  | 15/20   | Arabidopsis thaliana            | At5g67080 | NP_201509   | MAPKKK19 (see 624-4)  |
| PC628-2   | 253  | 34/57   | Catharanthus roseus             |           | AAB05871    | PAPS-reductase-like protein (see 625-3)   |
| PC628-3   | 340  | 100/113 | Arabidopsis thaliana            | At5g01960 | NP_568096   | protein binding / ubiquitin-protein ligase/ zinc ion binding (see 336-1-1) (BUT 2x taq) |
| PC628-4   | 327  | 27/45   | Oryza sativa                    |           | BAD01246    | putative MtN19 (see 604-2)  |
| PC648-1   | 70   |         |                                 |           |             | no significant similarity found   |
| PC648-2   | 70   |         |                                 |           |             | no significant similarity found   |
| PC648-3   | 70   |         |                                 |           |             | no significant similarity found   |
| PC648-4   | 70   |         |                                 |           |             | no significant similarity found   |
| PC649-1   | <409 | 75/101  | Arabidopsis thaliana            | At1g19270 | NP_173361   | zinc ion binding (BUT no taq)   |
| PC652-1   | 174  |         |                                 |           |             | no significant similarity found   |
| PC652-2   | 214  | 24/32   | Arabidopsis thaliana            | At3g21190 | NP_566677   | unknown protein   |
| PC652-3   | 185  | 56/60   | Helianthus annus                |           | CAC80371    | Acyl-ACP thioesterase   |
| PC652-4   | 174  |         |                                 |           |             | no significant similarity found   |
| PC678-1   | 140  |         |                                 |           |             | no significant similarity found   |
| PC678-2   | 140  |         |                                 |           |             | no significant similarity found   |
| PC678-3   | 142  | 25/39   | Arabidopsis thaliana            | At3g03530 | NP_566206   | NPC4 (NONSPECIFIC PHOSPHOLIPASE C4)   |
| PC678-4   | 146  | 15/16   | Arabidopsis thaliana            | At3g62290 | NP_191788   | GTP binding (see 735-1)   |
| PC684-1   | 260  | 40/83   | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 685-2)  |
| PC684-2   | 258  | 29/41   | Vitis vinifera                  |           | CAC18730    | NADH glutamate dehydrogenase  |
| PC684-3   | 243  | 43/61   | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 685-2)  |
| PC684-4   | 257  | 44/61   | Paracoccus denitrificans PD1222 |           | ZP_00630616 | conserved hypothetical protein (see 685-2)  |
| PC686-1   | 244  | 26/27   | Citrus x paradisi               |           | AAC67586    | pyrophosphate-dependent phosphofructokinase beta subunit                                |
| PC686-2   | 186  | 38/61   | Citrus x paradisi               |           | AAN76362    | serpin-like protein   |

|         |     |        |                                  |           |             |  |
|---------|-----|--------|----------------------------------|-----------|-------------|--|
| PC686-3 | 244 | 35/47  | Panax ginseng                    |           | BAA96068    | 60S ribosomal protein L27a                                     |
| PC686-4 | 186 | 38/61  | Citrus x paradisi                |           | AAN76362    | serpin-like protein  |
| PC738-1 | 243 | 28/71  | Corynebacterium efficiens YS 314 |           | NP_738153   | conserved hypothetical protein (see 665-2-2)                   |
| PC738-2 | 244 | 33/97  | Corynebacterium efficiens YS 314 |           | NP_738153   | conserved hypothetical protein (see 665-2-2)                   |
| PC738-3 | 249 | 46/53  | Arabidopsis thaliana             | At4g35260 | NP_195252   | IDH -1 (isocitrate dehydrogenase subunit 1) (NAD+ dependent)   |
| PC738-4 | 244 | 36/97  | Corynebacterium efficiens YS 314 |           | NP_738153   | conserved hypothetical protein (see 665-2-2)                   |
| PC751-1 | 175 | 33/43  | Scutellaria baicalensis          |           | BAA77388    | peroxidase 2   |
| PC751-2 | 209 | 23/48  | Daucus carota                    |           | BAB68539    | (S)-reticuline oxidase-like protein (see 397-1)                |
| PC751-4 | 175 |        |                                  |           |             | no significant similarity found                                |
| PC754-1 | 110 | 23/34  | Arabidopsis thaliana             | At1g66860 | NP_564885   | expressed protein  |
| PC754-2 | 194 | 31/37  | Arabidopsis thaliana             | At2g21390 | NP_179734   | coatomer alpha subunit   |
| PC754-3 | 109 |        |                                  |           |             | no significant similarity found                                |
| PC754-4 | 111 | 29/36  | Arabidopsis thaliana             | At2g21390 | NP_179734   | coatomer alpha subunit   |
| PC755-1 | 117 | 26/38  | Nicotiana tabacum                |           | BAA33810    | phi-1 (phosphate-induced) (see 748-4)                          |
| PC755-2 | 104 |        |                                  |           |             | no significant similarity found                                |
| PC755-3 | 106 |        |                                  |           |             | no significant similarity found                                |
| PC756-1 | 80  |        |                                  |           |             | no significant similarity found                                |
| PC756-2 | 80  |        |                                  |           |             | no significant similarity found                                |
| PC762-1 | 233 |        |                                  |           |             | no significant similarity found                                |
| PC762-3 | 69  |        |                                  |           |             | no significant similarity found                                |
| PC762-4 | 231 | 33/74  | Daucus carota                    |           | BAB68539    | (S)-reticuline oxidase-like protein (see 397-1)                |
| PC773-1 | 229 | 26/37  | Arabidopsis thaliana             | At2g31060 | NP_180664   | GTP binding / translation elongation factor                    |
| PC773-2 | 229 | 32/58  | Nicotiana tabacum                |           | CAC12822    | AP2 domain-containing transcription factor (ethylene response) |
| PC773-4 | 232 | 29/53  | Trichodesmium erythraeum         |           | ZP_00074911 | 3-isopropylmalate dehydratase large subunit                    |
| PC774-1 | 38  |        |                                  |           |             | no significant similarity found                                |
| PC774-2 | 225 | 36/53  | Arabidopsis thaliana             | At2g39170 | NP_181450   | unknown protein  |
| PC774-3 | 238 | 21/38  | Arabidopsis thaliana             | At3g26040 | NP_189233   | acyltransferase-like protein (see 283-2)                       |
| PC774-4 | 220 | 33/54  | Arabidopsis thaliana             | At4g04410 | CAB77909    | putative polyprotein   |
| PC786-1 | 356 | 79/118 | Solanum tuberosum                |           | AAP84703    | putative xyloglucanase inhibitor (see 787-1)                   |
| PC786-2 | 353 | 66/72  | Solanum tuberosum                |           | AAK84008    | beta-amylase PCT-BMYI (see 604-1)                              |
| PC786-3 | 356 | 85/118 | Solanum tuberosum                |           | AAP84703    | putative xyloglucanase inhibitor (see 787-1)                   |
| PC786-4 | 356 | 42/54  | Arabidopsis thaliana             | At2g26190 | NP_565618   | calmodulin binding (see 787-2)                                 |
| PC787-1 | 356 | 88/118 | Solanum tuberosum                |           | AAP84703    | putative xyloglucanase inhibitor (see 786-1)                   |
| PC787-2 | 358 | 81/110 | Arabidopsis thaliana             | At2g26190 | NP_565618   | calmodulin binding (see 278-2)                                 |
| PC787-3 | 356 | 81/118 | Solanum tuberosum                |           | AAP84703    | putative xyloglucanase inhibitor (see 786-1)                   |
| PC787-4 | 356 | 82/118 | Solanum tuberosum                |           | AAP84703    | putative xyloglucanase inhibitor (see 786-1)                   |

|         |     |        |                      |           |           |  |
|---------|-----|--------|----------------------|-----------|-----------|--|
| PC793-2 | 229 | 35/49  | Arabidopsis thaliana | At4g13930 | NP_193129 | SHM4 (SERINE HYDROXYMETHYLTRANSFERASE 4)                 |
| PC793-4 | 230 | 35/78  | Arabidopsis thaliana | At4g22030 | NP_193934 | F-box protein family (see 347-2)                         |
| PC802-1 | 108 | 14/19  | Zea mays             | CAC21393  |           | peroxidase   |
| PC802-3 | 114 | 19/29  | Arabidopsis thaliana | At1g12550 | NP_172716 | oxidoreductase family (see 801-2)                        |
| PC802-4 | 108 | 14/19  | Zea mays             | CAC21393  |           | peroxidase   |
| PC809-1 | 126 | 34/41  | Arabidopsis thaliana | At3g22750 | NP_566716 | putative protein kinase                                  |
| PC809-2 | 126 | 39/41  | Arabidopsis thaliana | At3g22750 | NP_566716 | putative protein kinase                                  |
| PC809-3 | 99  | 15/24  | Arabidopsis thaliana | BAB03027  |           | glutamine-fructose-6-phosphate transaminase 2            |
| PC809-4 | 125 | 27/29  | Arabidopsis thaliana | At3g22750 | NP_566716 | putative protein kinase                                  |
| PC810-1 | 91  | 24/30  | Arabidopsis thaliana | At5g56120 | NP_200423 | expressed protein  |
| PC810-2 | 89  |        |                      |           |           | no significant similarity found                          |
| PC810-3 | 72  | 16/23  | Arabidopsis thaliana | At2g45560 | NP_850439 | CYP76C1; heme binding / iron ion binding / monooxygenase |
| PC810-4 | 90  | 22/28  | Lactuca sativa       | AAL77102  |           | carbohydrate oxidase (see 784)                           |
| PC811-1 | 468 | 88/139 | Oryza sativa         |           | NP_914373 | unknown protein  |
| PC811-2 | 468 | 89/139 | Oryza sativa         |           | NP_914373 | unknown protein  |
| PC811-3 | 140 | 34/39  | Arabidopsis thaliana | At2g01600 | NP_565267 | expressed protein (see 758-1)                            |
| PC811-4 | 443 | 64/104 | Arabidopsis thaliana | At4g12650 | NP_193002 | transporter  |
| PC814-2 | 232 | 17/18  | Arabidopsis thaliana | At5g14310 | NP_568298 | unknown protein  |
| PC814-3 | 230 | 51/94  | Arabidopsis thaliana | At3g52120 | NP_566957 | RNA binding / nucleic acid binding                       |
| PC814-4 | 233 | 44/63  | Arabidopsis thaliana | At3g52120 | NP_566957 | RNA binding / nucleic acid binding                       |
| PC817-1 | 170 | 16/25  | Arabidopsis thaliana | At3g14870 | NP_188105 | unknown protein  |
| PC817-2 | 173 | 24/25  | Arabidopsis thaliana | At1g02780 | NP_171777 | EMB2386 (see 396-2)                                      |
| PC817-3 | 171 | 24/25  | Arabidopsis thaliana | At1g02780 | NP_171777 | EMB2386 (see 396-2)                                      |
| PC821-1 | 70  |        |                      |           |           | no significant similarity found                          |
| PC821-3 | 72  |        |                      |           |           | no significant similarity found                          |
| PC821-4 | 72  |        |                      |           |           | no significant similarity found                          |
| PC835-1 | 230 | 45/90  | Arabidopsis thaliana | At1g72750 | NP_177419 | inner mitochondrial membrane protein                     |
| PC835-2 | 242 |        |                      |           |           | no significant similarity found                          |
| PC835-3 | 230 | 49/90  | Arabidopsis thaliana | At1g72750 | NP_177419 | inner mitochondrial membrane protein                     |