

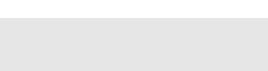
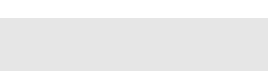

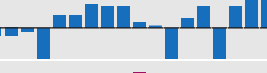









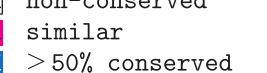






*HKD motif I*

## HKD motif II

Logo

|  |     |   |   |     |   |   |   |                        |                      |     |
|--|-----|---|---|-----|---|---|---|------------------------|----------------------|-----|
| <i>Equisetia</i>                           | 181 | HHTKLIINFYDNGECKIFLPSNFTSMTETNLP  | 212   | 432 | HSKFFYMHCAAT  | .....NSTGPCDASQVFKE   | .....EWC  | CLYTSANLSQTAWGTYSRK.   | 477                  |     |
| <i>D. rerio</i>                            | 269 | HHTKMMLLWYEEGRVITL.TSNLIIRADWYQK  | 299   | 501 | HIKTYMRISP  | .....DFTQL  | .....AWFLV  | TSANLSKAAWGALBKNN      | 537                  |     |
| <i>H. sapiens</i>                          | 262 | HHTKMMLLLYEEGRVVIH.TSNLIHADWHQK   | 292   | 493 | HIKTYMRPSP  | .....DFSK   | .....AWFLV  | TSANLSKAAWGALBKNG      | 529                  |     |
| <i>H. glaber</i>                           | 262 | HHTKMMLLLYEEGRVVIH.TSNLIREDWHQK   | 292   | 493 | HIKTYMRLSP  | .....NSSR   | .....AWFLV  | TSANLSKAAWGALBKNG      | 529                  |     |
| <i>X. tropicalis</i>                       | 250 | HHTKMMLLLYTEGLRVVIH.TSNLIHEDWYQK  | 280   | 482 | HIKTYMRLSP  | .....DSQHL  | .....AWFLV  | TSANLSKAAWGSLBKNG      | 518                  |     |
| <i>C. brachyrhynchos</i>                   | 258 | HHTKMMLLLYEEGRVVIH.TSNLIAEDWHQK   | 288   | 490 | HIKTYMRLSP  | .....DFQKI  | .....AWFLV  | TSANLSKAAWGALBKNG      | 526                  |     |
| <i>C. picta bellii</i>                     | 260 | HHTKMMLLLYEEGRVVIH.TSNLIADADWQK   | 290   | 492 | HIKTYMRPSP  | .....DFQKI  | .....AWFLV  | TSANLSKAAWGALBKNG      | 528                  |     |
| <i>C. papaya</i>                           | 268 | HHSKAMLLVYPGRGTRVIVH.TANLIYVDWNNK   | 298   | 469 | HIKTFTRYSG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 503                  |     |
| <i>A. chinensis</i> var. <i>chinensis</i>  | 282 | HHSKAMLLVYPGRVIVIVH.TANLIYVDWNNK  | 312   | 512 | HIKTYTRYNG  | .....QNL  | .....AWLL   | LLTSSNLSKAAWGV         | LQKNN                | 546 |
| <i>A. annua</i>                            | 390 | HHSKAMFLVYPQGVRIIVH.TANLIYVDWNNK  | 420   | 620 | HIKTFTRYNG  | .....QNL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 654                  |     |
| <i>H. annuus</i>                           | 278 | HHSKAMFLVYPQGVRIIVH.TANLIYVDWNNK  | 308   | 507 | HIKTFTRYNG  | .....QNL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 541                  |     |
| <i>L. sativa</i>                           | 281 | HHSKAMFLVYPEGVRIIVH.TANLIYVDWNNK  | 311   | 512 | HIKTFTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 546                  |     |
| <i>C. cardunculus</i> var. <i>scolymus</i> | 279 | HHSKAMFLVYPRGVRIIVH.TANLIYVDWNNK  | 309   | 509 | HIKTFTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 543                  |     |
| <i>C. arabica</i>                          | 284 | HHSKAMLLVYPQGVRVVVH.TANLIHVDWNNK  | 314   | 514 | HIKTFTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKGN      | 548                  |     |
| <i>C. eugenoides</i>                       | 284 | HHSKAMLLVYPQGVRVVVH.TANLIHVDWNNK  | 314   | 514 | HIKTFTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKGN      | 548                  |     |
| <i>N. attenuata</i>                        | 281 | HHSKAMTLVYPTGVRVIVH.TANLIYVDWNNK  | 311   | 511 | HIKTFRLRYNG   | .....QSL  | .....AWLL   | LLTSSNLSKAAWGS         | LQKNN                | 545 |
| <i>S. tuberosum</i>                        | 279 | HHSKAMLLVYPTGVRVIVH.TANLISIDWNNK  | 309   | 509 | HIKTFRLRYNG   | .....QSL  | .....AWFLL  | TSSNLSKAAWGT           | LQKNN                | 543 |
| <i>S. lycopersicum</i>                     | 278 | HHSKAMLLVYPTGVRVIH.TANLISIDWNNK   | 308   | 508 | HIKTFRLRYNG   | .....QSL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 544                  |     |
| <i>S. pennellii</i>                        | 303 | HHSKAMLLVYPTGVRVIH.TANLISIDWNNK   | 333   | 533 | HIKTFRLRYNG   | .....QSL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 567                  |     |
| <i>B. rapa</i>                             | 240 | HHSKAITFLVYPRGVRVVH.TANLIHVDWNNK  | 270   | 473 | HIKTFTRYSD  | .....QKI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 507                  |     |
| <i>B. napus</i>                            | 241 | HHSKAITFLVYPRGVRVVH.TANLIHVDWNNK  | 271   | 473 | HIKTFTRYSD  | .....QKI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 507                  |     |
| <i>C. rubella</i>                          | 306 | HHSKAITFLVYPRGVRVVH.TANLIHVDWNNK  | 336   | 537 | HIKTFTRYSD  | .....QKL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 571                  |     |
| <i>E. salsugineum</i>                      | 252 | HHSKAITFLVYPRGVRVVH.TANLIHVDWNNK  | 282   | 484 | HIKTFTRYSD  | .....QKL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 518                  |     |
| <i>A. thaliana</i>                         | 235 | HHSKAITFLVYPRGVRVVH.TANLIHVDWNNK  | 265   | 466 | HIKTFTRYND  | .....QKI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 500                  |     |
| <i>L. lyrata</i> subsp. <i>lyrata</i>      | 242 | HHSKAITFLVYPRGVRVVH.TANLIHVDWNNK  | 272   | 473 | HIKTFTRYND  | .....QKL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 507                  |     |
| <i>G. arboreum</i>                         | 273 | HHSKAMVLVYPQGVRIIVH.TANLIYVDWNNK  | 303   | 503 | HIKTYTRYKG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 537                  |     |
| <i>G. raimondii</i>                        | 273 | HHSKAMLLVYPQGVRIIVH.TANLIYVDWNNK  | 303   | 503 | HIKTYTRYKG  | .....QNL  | .....VW   | FLLTSANLSKAAWGALQKNN   | 537                  |     |
| <i>D. zibethinus</i>                       | 266 | HHSKAMLLVYPQGVRIIVH.TANLIYVDWNNK  | 296   | 496 | HIKTYTRFKG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 530                  |     |
| <i>T. cacao</i>                            | 273 | HHSKAMLLVYPQGVRIIVH.TANLIYVDWNNK  | 303   | 503 | HIKTYTRYKG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 537                  |     |
| <i>H. umbratica</i>                        | 273 | HHSKAMLLVYPQGVRIIVH.TANLIYVDWNNK  | 303   | 503 | HIKTYTRYKG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 537                  |     |
| <i>P. trichocarpa</i>                      | 268 | HHSKAMFLVYPRGVRVIVH.TANLIYVDWNNK  | 298   | 498 | HIKTFTRYNG  | .....QKL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 532                  |     |
| <i>R. communis</i>                         | 271 | HHSKAMLLVYPRGMRIIVH.TANLIYVDWNNK  | 301   | 501 | HIKTFTRYNG  | .....QKL  | .....AWLL   | LLTSANLSKAAWGALQKNN    | 535                  |     |
| <i>J. curcas</i>                           | 278 | HHSKAMLLIYPGRVRIIVH.TANLIYVDWNNK  | 308   | 508 | HIKTFTRYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 542                  |     |
| <i>M. esculenta</i>                        | 279 | HHSKAMFLVYPRGVRIIH.TANLIYVDWNNK   | 309   | 510 | HIKTFTRYSG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 544                  |     |
| <i>H. brasiliensis</i>                     | 279 | HHSKAMLLVYPRGVRIIH.TANLIYVDWNNK   | 309   | 509 | HIKTFTRYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 543                  |     |
| <i>S. oleracea</i>                         | 293 | HHSKAMLLVYPRGVRIIVH.TANLINVDWNNK  | 323   | 523 | HIKTFVRYNG  | .....QNI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 557                  |     |
| <i>E. grandis</i>                          | 269 | HHSKAMLLVYPTGVRIVH.TANLINVDWNNK   | 299   | 499 | HIKTYTRYKG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKGN      | 533                  |     |
| <i>M. truncatula</i>                       | 261 | HHSKAMFLVYPRGVRVIH.TANLIYVDWNNK   | 291   | 491 | HIKTFARYNN  | .....QNL  | .....AWF  | CLTSSNLSKAAWGALQKNN    | 525                  |     |
| <i>C. arietinum</i>                        | 263 | HHSKAMFLVYPRGRIIVH.TANLIYVDWNNK   | 293   | 493 | HIKTFARYNN  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 527                  |     |
| <i>A. precatorius</i>                      | 273 | HHSKAMLLIYPKGVRVIVH.TANLIYVDWNNK  | 303   | 503 | HIKTFARYNN  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 537                  |     |
| <i>C. cajan</i>                            | 241 | HHSKAMLLIYPQGVRIIVH.TANLIYVDWNNK  | 271   | 471 | HIKTFARYNN  | .....QNL  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 505                  |     |
| <i>M. pruriens</i>                         | 278 | HHSKAMLLIYPQGVRIIVH.TANLIYVDWNNK  | 308   | 508 | HIKTFARYNN  | .....QSL  | .....   | AKAAWGALQKNN           | 532                  |     |
| <i>V. radiata</i> var. <i>radiata</i>      | 276 | HHSKAMLLIYPQGVRIIVH.TANLIYVDWNNK  | 306   | 506 | HIKTFARYNN  | .....QSL  | .....AWFLL  | TSANLSKAAWGALQKNS      | 540                  |     |
| <i>G. soja</i>                             | 273 | HHSKAMMLIYPQGVRIIVH.TANLIYVDWNNK  | 303   | 503 | HIKTFARYKN  | .....QSL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 537                  |     |
| <i>G. max</i>                              | 273 | HHSKAMMLIYPQGVRIIVH.TANLIYVDWNNK  | 303   | 503 | HIKTFARYKN  | .....QSL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 537                  |     |
| <i>M. charantia</i>                        | 279 | HHSKAITFLVYPRGIRMVVH.TANLIYVDWNNK   | 309   | 509 | HIKTFARYNG  | .....QKL  | .....AWL  | VLTSSNLSKAAWGALQKNN    | 543                  |     |
| <i>C. sativus</i>                          | 353 | HHSKAITFLVYPRGIRMVVH.TANLIYVDWNNK   | 383   | 583 | HIKTFARYNG  | .....QKL  | .....AWL  | VLTSSNLSQAAWGALQKNN    | 617                  |     |
| <i>C. maxima</i>                           | 274 | HHSKAITFLVYPRGIRMVVH.TANLIYVDWNNK   | 304   | 504 | HIKTFARYNG  | .....QKL  | .....AWL  | VLTSSNLSKAAWGALQKNN    | 538                  |     |
| <i>C. moschata</i>                         | 274 | HHSKAITFLVYPRGRIIVH.TANLIYVDWNNK  | 304   | 504 | HIKTFARYNG  | .....QKL  | .....AWL  | VLTSSNLSKAAWGALQKNN    | 538                  |     |
| <i>C. pepo</i> subsp. <i>pepo</i>          | 274 | HHSKAITFLVYPRGRIIVH.TANLIYVDWNNK  | 304   | 504 | HIKTFARYNG  | .....QKL  | .....AWL  | VLTSSNLSKAAWGALQKNN    | 538                  |     |
| <i>Z. jujuba</i>                           | 296 | HHSKAMLLVYPRGVRIVH.TANLIFVDWNNK   | 326   | 526 | HIKTFTRYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 560                  |     |
| <i>M. notabilis</i>                        | 288 | HHSKAMLLVYPRGVRIIH.TANLIYVDWNNK   | 318   | 518 | HIKTFARYND  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 552                  |     |
| <i>P. andersonii</i>                       | 283 | HHSKAMLLVYPRGVRIIH.TANLIYVDWNNK   | 313   | 513 | HIKTFARYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQGN       | 547                  |     |
| <i>T. orientale</i>                        | 283 | HHSKAMLLVYPRGVRIIH.TANLIYVDWNNK   | 313   | 513 | HIKTFARYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 547                  |     |
| <i>C. sinensis</i>                         | 255 | HHSKAMLLIYPGRVRIIVH.TANLIHVDWNNK  | 285   | 485 | HIKTFARYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 519                  |     |
| <i>C. clementina</i>                       | 255 | HHSKAMLLIYPGRVRIIVH.TANLIHVDWNNK  | 285   | 485 | .....N  | .....CEC  | .....SW   | FLLTSANLSKAAWGALQKNN   | 510                  |     |
| <i>Q. suber</i>                            | 276 | HHSKAMLLVYRRGVRIIVH.TANLIYVDWNNK  | 306   | 506 | HIKTFTRYNG  | .....QKL  | .....AWLL   | LLTSSNLSKAAWGALQKNN    | 540                  |     |
| <i>F. vesca</i> subsp. <i>vesca</i>        | 261 | HHSKAMLLVYPRGVRVIVH.TANLIFVDWNNK  | 291   | 491 | HIKTFTRYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 525                  |     |
| <i>R. chinensis</i>                        | 274 | HHSKAMLLVYPRGVRIIVH.TANLIFVDWNNK  | 304   | 504 | HIKTFTRYSG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 538                  |     |
| <i>M. domestica</i>                        | 241 | HHSKAMTLVYPRGVRIVH.TANYIHVDWNNK   | 271   | 471 | HIKTFARYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 505                  |     |
| <i>P. persica</i>                          | 294 | HHSKAMLLVYPRGVRIIVH.TANLIFVDWNNK  | 324   | 524 | HIKTYTRYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 558                  |     |
| <i>P. avium</i>                            | 294 | HHSKAMLLVYPRGVRIIVH.TANLIFVDWNNK  | 324   | 524 | HIKTYTRYNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 558                  |     |
| <i>P. patens</i>                           | 343 | HHTKAMFLLYPTGTRIVVH.TANLIYIDWNNK  | 373   | 574 | HIKTFRLRYNG   | .....QRL  | .....AWFLL  | TSSNLSKAAWGV           | LQKNG                | 608 |
| <i>S. moellendorffii</i>                   | 260 | HHSKAMLLVYPTGVRVVH.TANLINIDWNNK   | 290   | 490 | HIKTFVFRE   | .....NAL  | .....AWV  | CLTSSNLSKAAWGALQKNK    | 524                  |     |
| <i>P. sylvestris</i>                       | 358 | HHSKAMLLVYSRGVRVVH.TANLIYVDWNNK   | 388   | 588 | HIKTYARYNG  | .....QEL  | .....AWFLL  | TSSNLSKAAWGALQKNS      | 622                  |     |
| <i>T. baccata</i>                          | 307 | HHSKAMLLVYSRGVRVVH.TANLIYVDWNNK   | 337   | 537 | HIKTYARYNG  | .....QNL  | .....AWFLL  | TSSNLSKAAWGALQKNS      | 571                  |     |
| <i>D. oligosanthos</i>                     | 261 | HHSKAMLLVYPQGVRVVVH.SANMIHVDWNNK  | 291   | 491 | HIKTFTRYNG  | .....QDI  | .....SW   | FLLTSSNLSKAAWGALQKNN   | 525                  |     |
| <i>O. sativa Japonica Group</i>            | 378 | HHSKAMLLVYPQGVRVVVH.TANLIHVDWNNK  | 408   | 608 | HIKTFTRYNG  | .....QDI  | .....AWFLL  | TSANLSKAAWGALQKNN      | 642                  |     |
| <i>B. distachyon</i>                       | 301 | HHSKAMLLVYPQGVRVVVH.TANLIHVDWNNK  | 331   | 531 | HIKTFARYNG  | .....QNI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 565                  |     |
| <i>T. urartu</i>                           | 299 | HHSKAMLLVYPQGVRVVVH.TANLIHVDWNNK  | 329   | 529 | HIKTFTRYNG  | .....QNI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 563                  |     |
| <i>A. tauschii</i> subsp. <i>tauschii</i>  | 299 | HHSKAMLLVYPQGVRVVVH.TANLIHVDWNNK  | 329   | 529 | HIKTFTRYNG  | .....QNI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 563                  |     |
| <i>S. italica</i>                          | 301 | HHSKAMLLVYPQGVRIIVH.TANLIHVDWNYK  | 331   | 531 | HIKTFTRYSG  | .....QNI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 565                  |     |
| <i>P. hallii</i>                           | 301 | HHSKAMLLVYPQGVRVVVH.TANMIHVDWNNK  | 331   | 531 | HIKTFTRYNG  | .....QNI  | .....AWLL   | LLTSSNLSKAAWGALQKNN    | 565                  |     |
| <i>Z. mays</i>                             | 298 | HHSKAMLLVYPQGVRIIVH.TANLIHVDWNYK  | 328   | 528 | HIKTFTRYSG  | .....QNI  | .....AWFLL  | TSANLSKAAWGALQKNN      | 562                  |     |
| <i>S. bicolor</i>                          | 301 | HHSKAMLLVYPQGVRIIVH.TANLIHVDWNYK  | 331   | 531 | HIKTFTRYSG  | .....QNI  | .....AWFLL  | TSSNLSKAAWGALQKNN      | 565                  |     |
| <i>P. equestris</i>                        | 306 | HHSKAITFLVYEKGVRRIIH.SANLIYVDWNNK   | 336   | 536 | HIKSYTRHSA  | .....QNI  | .....AWFLL  | TSANLSKAAWGALQKNN      | 570                  |     |
| <i>D. catenatum</i>                        | 316 | HHSKAMLLVYETGVRIIH.SANLIHVDWNNK   | 346   | 546 | HIKSYTRHSG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 580                  |     |
| <i>A. comosus</i>                          | 270 | HHSKAMLLVYPQGVRVVVH.TANLIYVDWNNK  | 300   | 500 | .....FKQ  | .....GSL  | GCITEEQYATYDTWVYYFCRPFILNHI   | .....                  | 533                  |     |
| <i>A. shenzhenica</i>                      | 161 | HHSKAMLLIYQNGLRVIVH.TANLIHVDWNNK  | 191   | 391 | HIKSYTRHNG  | .....QKL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 425                  |     |
| <i>A. trichopoda</i>                       | 303 | HHSKAMTLVYPRGVRIIVH.TANLIYVDWNNK  | 333   | 533 | HIKTYTRYNG  | .....QSL  | .....AWFLL  | TSANLSKAAWGALQKNC      | 567                  |     |
| <i>V. vinifera</i>                         | 276 | HHSKAMLLVYPRGVRVIVH.TANLIYVDWNNK  | 306   | 506 | HIKTYTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 540                  |     |
| <i>M. cordata</i>                          | 303 | HHSKAMFLVYPQGVRIIVH.TANLIHVDWNNK  | 333   | 533 | HIKTYTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKND      | 567                  |     |
| <i>A. officinalis</i>                      | 300 | HHSKAMTLVYATGVRVVH.TANLIYVDWNNK   | 330   | 530 | HIKTYTRYNG  | .....QNL  | .....AWFLL  | TSANLSKAAWGALQKNN      | 564                  |     |
| <i>P. dactylifera</i>                      | 109 | HHSKAMLLVYPQGVRVVVH.TANLIYVDWNNK  | 139   | 339 | HIKTYTRYNG  | .....QNL  | AVSVRS  | .....FSFPLN            | WFLTSSNLSKAAWGALQKNS | 385 |
| <i>C. subellipsoidea C-169</i>             | 103 | HHSKAFLLVQFDRGLRVVVH.TANLIHQDCNCK   | 133   | 343 | HIKSYLTHSG  | .....QRL  | .....AY   | VLTSNLSKAAWGV          | LQKNN                | 377 |
| <i>T. socialis</i>                         | 291 | HHSKAFLLVYPSGLRLVIH.TSNAIFADCNQK  | 321   | 548 | HIKSYTRYRG  | .....QQL  | .....AWLL   | VASHNLSKAAWGGL         | LKNG                 | 582 |
| <i>C. sorokiniana</i>                      | 163 | HHSKAFITIEYERGLRVVIF.SANAIYPDCNNK   | 193   | 392 | HIKSYLTRYG  | .....DEV  | .....AWQY   | VGSHNLSKAAWGQL         | LQKNA                | 426 |
| <i>M. conductrix</i>                       | 239 | HHSKAFITLQYQHGVRIIV.TANAIYPDCNNK  | 269   | 473 | HIKTYLTRYRVVQPAAGAAGAAGAAAAAGGDAGGAAAGAAGPAVEV  | .....   | .....AWMY   | VGSHNLSKAAWGALQKQG     | 539                  |     |
| consensus                                  |     | HHSKAmLLvYp.GvRvIVH.TANLIyvDWNnK  |   |     | HIKTFtRyng  | .....Q.i  | .....   | AWflltSaNLSKAAWGaLQKNN |                      |     |
| Charge                                     |     |  |  |     |  |  |  |                        |                      |     |
| Conservation                               |     |  |  |     |  |  |  |                        |                      |     |
| Hydrophob.                                 |     |  |  |     |  |  |  |                        |                      |     |
| Weight                                     |     |  |  |     |  |  |  |                        |                      |     |
| Fungi                                      |     |   |   |     |   |   |   |                        |                      |     |
| Animals                                    |     |   |   |     |   |   |   |                        |                      |     |
| Superasterids                              |     |   |   |     |   |   |   |                        |                      |     |
| Rosids                                     |     |   |   |     |   |   |   |                        |                      |     |
| Ancestral Plants                           |     |   |   |     |   |   |   |                        |                      |     |
| Gymnosperms                                |     |   |   |     |   |   |   |                        |                      |     |
| Monocots                                   |     |   |   |     |   |   |   |                        |                      |     |
| Basal Eudicots                             |     |   |   |     |   |   |   |                        |                      |     |
| Algae                                      |     |   |   |     |   |   |   |                        |                      |     |
|  |     | <input checked="" type="checkbox"/> non-conserved                                   |   |     |   |   |   |                        |                      |     |
|  |     | <input checked="" type="checkbox"/> similar   |   |     |   |   |   |                        |                      |     |
|  |     | <input checked="" type="checkbox"/> ≥ 50% conserved                                 |   |     |   |   |   |                        |                      |     |
|  |     | <input checked="" type="checkbox"/> ≥ 90% conserved                                 |   |     |   |   |   |                        |                      |     |