

```

P-SSM2 1 -----MWMMSRLTIMLTSLSLFLSFLAQSAAWATEVVTMG-SNGNLVFEPND 43
TrichoIMS101 1 -----MSKISSLSKSIAILASVVMVVISSLVFSSPAEAAANYKVTMG--AGGLQFAPKK 51
AnaPCC7120 1 -----MKLIAASLRRSLAVLTVLLVSSFAVFTPSASAETTYTVKLGSDKGLLVFEPAPK 54
ProSS120 1 -----MISSLRSALSACFALLLVLAFGVASAQAQKTVVEVKLGTDAAGMLAFEPSS 48
ProMED4 1 -----MLRSIFAGFFAVLTLGLGISSVSAKTVVEVKLGTDAAGMLAFEPSS 45
Pro9313 1 -----MASMLRSIAAAACALFLVIGLVSSVQAATTEVKLGSDSGMLAFEPSS 48
SYNWH8102 1 -----MRSVLRTLAAACALLMLIGLVNVTGAQAATVEVKLGTDAAGMLAFEPAT 48
SynPCC7942 1 -----MKVLASFARRELSLFAVAAVLCVGSFFLSAAPASAOITVAIKMGADNGMLAFEPST 54
SyncyPCC6803 1 -----MSKKFLTILAGLLLVSSFFLSVSPAAAANATVKMGSDSGALVFEPST 48
Arabidopsis 1 MAAITSATVTIPSF TGLK LAVSSKPKTLSTISRSTSATRAPPKLALKSSLKDFGLAVATAASIVLAGNAMAMEVLLGSDGSLAFVPS 90
Spinacia 1 ---MATVASSAAVAVPSFTGLKASGSIKPTTAKIIPPTTAVPRLSVKASLKNVGAAVVATAAAGLLAGNAMAVEVLLGGGDGSLAFVLP 87
Chlamydomonas 1 -----MKATLRAPASRASAVRPVAVSLKAAAQRVASVAGVSVASLALTLAAHADATVKLGADSGALEFVPKT 66
Clustal Consensus 1 : : * * * * 7

```

```

P-SSM2 44 ITINAGDVTVFTNGALP PHNMTVKDH-----PELSHGDLAFATGDSFDVTFP---DAGDFEFQCDPHRAGAGMKGVITHVQ- 114
TrichoIMS101 52 VTVQPGDVTVTFKNGMLQPHNVIFNPAKSPNA--DLSKALSHKELAYKPGESFDISIPADATAGDYEFFCTPHRGAGMVGHMIVK- 133
AnaPCC7120 55 LTIKPGDVTVEFLNNKVP PHNVVFDAAALNPAKSADLAKSLSHKQLLMSPGQSTSTTFPADAPAGEYTFYCEPHRGAGMVGKLTIVAG 139
ProSS120 49 VTISTGDSVVKFVNKKLAPHNAVFEFGH-----EELSHPLDLAFAPGESWQETFT---EAGTYDYCEPHRGAGMVGKVVVN- 119
ProMED4 46 VTISTGDTVKFINNKLAPHNAVFDGH-----EELSHADLAFAPGESWEETF D---TAGTFDYCEPHRGAGMVGKVI E- 116
Pro9313 49 ITIQEGDITK FVNKKLAPHNAVFEFGH-----DELSHSDLAFAPGESWEETF---TAGTYDFYCEPHRGAGMVGKVTVE- 119
SYNWH8102 49 VNIKAGDVKFINNKLAPHNAVFDGH-----DEYSHGDLAFNPGESWEETF S---EAGTFDYCEPHRGAGMVGKVI E- 119
SynPCC7942 55 IEIQAGDVTQVWVNNKLAPHNVVVEGGQ-----PELSHKDLAFSPGETFEATFS---EPGTYTYCEPHRGAGMVGKLVVQ- 125
SyncyPCC6803 49 VTIKAGEEIVKVVNNKLSPHNIVFAADGVDAD---TAAKLSHKGLAFAPAGESFTSTFT---EPGTYTYCEPHRGAGMVGKVVVE- 126
Arabidopsis 91 FTVAKGEKIVFKNNAGFP HN VFEDEDEIPSGVDASKISMDETALNLCAGETYEVTILT---EPCSYGFYCAPHOGAGMVGKLTIVK- 171
Spinacia 88 FSVASGEELIVFKNNAGFP HN VFEDEDEIPSGVDAAKISMSEEDLLNAPGETYKVTILT---EKGTYKFCYCSPHOGAGMVGKVTVN- 168
Chlamydomonas 67 LTIKSGEIVNFVNAGFP HN VFEDEDAIPSGVNA--DAISRDDYLNAPGETYSVKILT---AAGBYGYCEPHOGAGMVGKLTIVQ- 145
Clustal Consensus 7 . : * : : : * . *** . . . . * : : : * * * * * * : * 34

```