

OsTPS1	MATSVPSVLLLLFPVPTCTDMLVSPVECGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKRRKAHVSEEQVRRMILECSSGPNL	85
OoTPS1	MATSVPSVLLLLFPVPTCTDMLVSPVECGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKRRKAHVSEEQVRRMILECSSGPNL	85
OgTPS1	MATSVPSVLLLLFPVPTCTDMLVSPVECGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKRRKAHVSEEQVRRMILECSSGPNL	85
OrTPS1	MATSVPSVLLLLFPVPTCTDMLVSPVECGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKRRKAHVSEEQVRRMILECSSGPNL	85
ObTPS1	MATSVPSVLLLLFPVPTCTDMLVSPVECGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKRRKAHVSEEQVRRMILECSSGPNL	85
OgluTPS1	MATSVPSVLLLLFPVPTCTDMLVSPVECGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKRRKAHVSEEQVRRMILECSSGPNL	85
OnTPS1	MATSVPSVLLLLFPVPTCTNMLVSPVERGDLHCKPFPDHHPNVWGYFLTFSPCTFPSMLLMKREAHVSEEQVRRMILECSSGPNL	85
SbTPS4	-----MAIEAKIQHQAOQIEDVHPK----FHSSLWGFDFLLHHVPCRFVQYLMKDKVEIMKEEVKKMLLDVDS--FDL	68
ZmTPS23	-----MAADEARSVSRHSEEDMHGK----HHSWLWGFDFLLHHVPCRFVQYLMKDNVEIMKEEVKKMLLDVGS--SDL	68
OsTPS1	HVKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDD--TDNHYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	169
OoTPS1	HVKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDD--TDNHYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	169
OgTPS1	HVKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDD--TDNHYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	169
OrTPS1	HVKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDD--TDNHYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	169
ObTPS1	HVKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDD--TDNHYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	169
OgluTPS1	HVKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDD--TDNHYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	169
OnTPS1	HIKLEIVDTLRLCIDYHYEKEIENVLRVVEEEDDSDNICYDLHTTALRFYLLRKHGYVYASPDVFORFRDEEGNFTDNDNNNGT	170
SbTPS4	SDKLEICIDTLRLGLDYHYTKEDKLMCNTEFKASDQ----DLDLPTTSHLFYLLRKHGYVYHISDVFLKFRDDKGNIVTDD----A	145
ZmTPS23	SKKLDICIDTLRLGLDYHYTKEDKLMCNTEFKARQ----DLDLPTTSQLFYLLRKHGYVYHISDVFLKFRDDKGLIVTND----A	145
OsTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMADEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	254
OoTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMADEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	254
OgTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMADEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	254
OrTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMADEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	254
ObTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMADEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	254
OgluTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMADEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	254
OnTPS1	RSMLSLYNAHLRIHGEEILDDAIVFTRNYLQSVVKHLQSPMTEDEVCSALRTPLFRPRRVEARHYISVYDKLPTRNETILEFAK	255
SbTPS4	RCLLIMYEAHLRVKGEIILDNLIIFTKSOLQCIIDDLEPQLKEEVKYALETPLFRRLKRVQTRQYISIEYKNTAHNMLLEFSK	230
ZmTPS23	RCLLRMYEAHVRVNGEEILDNLIIFTKRLOQCIIDDLEPTLQEVRYALETPLFRRLNRVQARCFISTYKSTTRINMLLEFSK	230
OsTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	338
OoTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	338
OgTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	338
OrTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	338
ObTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	338
OgluTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	338
OnTPS1	LDFGILQSLYCEELNILTMWVKELQLQDHIS--FARDRMVEMHFWMGLGVLFEPQYSYGRMLTKLIFVSIFFDDIYDNYSTLEESK	339
SbTPS4	LDFNILLTLYCEELKDLTLWVTEFCQANTSIYARDRMVEMHFWMGVLFEPQYSYSRKMLTQLEFMIIVSILLDDLYDNHCTTEEGN	315
ZmTPS23	LDFNILLTLYCEELKDLTLWVTEFCACANTSIYARDRMVEMHFWMGVLFEPQYSYSRKMLTQLEFMIIVSVLDDLYDSHCTTEEGN	315
OsTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITMKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	423
OoTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITMKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	423
OgTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITMKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	423
OrTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITMKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	423
ObTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITMKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	423
OgluTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITMKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	423
OnTPS1	LFTEAERWDEEAAEELPGYMKFFYKVLITIKSIEIDLKIQGNKHVDYVKNLLIDATRIFYNEVKWRSEGADQVAATVBEHLKI	424
SbTPS4	VFTAALERWDEEAVEQCPTYLRTLTVNLLTVKALTEWLNLNQNNKHAKIVKRLIIDMAKCYNAETEWDRK--KYVPAVDEHLKI	398
ZmTPS23	AFTAALQRWDEEGVQCPTYLRTLTVNIRATIKATEEDLNFNQNNKHAKIVKGLIIDMAMCYNAETEWDRK--KYVPAVDEHLKI	398
OsTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGMAYPKIITSSCIVGRLNDIASHEREQGSSSSSS--TVEACMREHGGITKEEAYA	508
OoTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGMAYPKIITSSCIVGRLNDIASHEREQGSSSSSS--TVEACMREHGGITKEEAYA	507
OgTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGMAYPKIITSSCIVGRLNDIASHEREQGSSSSSS--TVEACMREHGGITKEEAYA	507
OrTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGMAYPKIITSSCIVGRLNDIASHEREQGSSSSSS--TVEACMREHGGITKEEAYA	507
ObTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGMAYPKIITSSCIVGRLNDIASHEREQGSSSSSS--TVEACMREHGGITKEEAYA	507
OgluTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGMAYPKIITSSCIVGRLNDIASHEREQGSSSSSS--TVEACMREHGGITKEEAYA	505
OnTPS1	SVPSSCMHVPVYAFVAMGNDVTTDDAINWGIAYPKIITSSCIVGRLNDIASHEREGSS--SS--TVEACMREHGGITKEEAYA	506
SbTPS4	SARSSGCMHIVSQGFISMG--DVATSEALKMASTYPKIIVAVCIITARLANDIMSYKRETSQNMVS--TVKTCAYBYG--TVAQAIE	480
ZmTPS23	SARSSGCMHIVSQGFISMG--DVATSEALEMASTYPKIIVRAVCIITARLANDIMSYKREASNNMTMVS--TVKTCAYBYGTTTVAQAIE	481
OsTPS1	KLRELVEESWMDIAGECLRPAQAQ--PPPLLEAVVNATRVLDVFKDDQDAYTHPSSLKDTIHSIYILSV--	576
OoTPS1	KLRELVEESWMDIAGECLRPAQAQ--PPPLLEAVVNATRVLDVFKDDQDAYTHPSSLKDTIHSIYILSV--	575
OgTPS1	KLRELVEESWMDIAGECLRPAQAQ--PPPLLEAVVNATRVLDVFKDDQDAYTHPSSLKDTIHSIYILSV--	574
OrTPS1	KLRELVEESWMDIAGECLRPAQAQ--PPPLLEAVVNATRVLDVFKDDQDAYTHPSSLKDTIHSIYILSV--	575
ObTPS1	KLRELVEESWMDIAGECLRPAQAQ--PPPLLEAVVNATRVLDVFLYKDDQDAYTHPSSLKDTIHSIYILSV--	575
OgluTPS1	KLRELVEESWMDIAGECLRPAQAQAPPLLEAVVNATRVLDVFLYKDDQDAYTHPSSLKDTIHSIYILSV--	574
OnTPS1	KLRELVEESWMDIAGECLRPAQAQAPPLLEAVVNATRVLDVFIYKDDQDAYTHPSSLKDTIHSIYILSV--	575
SbTPS4	KLRELIEEAWMDITECLRQQPK---VLLERAVNLARTMDFLYKD--VDCYTDSTRSIRKIGILDSLYVDLIN	546
ZmTPS23	KIRELIEEAWMDITECLRQPK---ALLERAVNLARTMDFLYKD--ADCYTDSTRSIRKIGILDSLYVHLID	547

(Additional file 2. Amino acid sequence alignment of OryzaTPS1s, SbTPS4 and ZmTPS3.