Sequences and adjusted gene models

The following supplemental information describes the protein sequence data used in the phylogenetic analysis presented in this paper. Table 1 describes the default source of protein sequences. Any modifications to *Ostreococcus tauri* sequences are also described below. Sequences information is presented for novel gene models, existing gene model alterations, and inference of gaps in *O. tauri* sequences based on orthologous sequences in *Ostreococcus lucimarinus*.

Table 1 Locations of protein sequence data used in this paper.

Species	**Database**	**URL**	**Version**
Ostreococcus tauri	BEG	https://bioinformatics.psb.ugent.be/gdb/ostreococcus/O.tauri	Dec-2006
Ostreococcus lucimarinus	UniProt	http://www.uniprot.org/uniprot/?query=organism%3a436017+keyword%3a181&force=yes&format=fasta	Nov-2012
Saccharomyces cerevisiae	KinBase	http://kinase.salk.edu/kinbase/FastaFiles/Bakers_Yeast_kinase_protein.fasta	Nov-2012
Arabidopsis thaliana	TAIR	ftp://ftp.arabidopsis.org/home/tair/Proteins/TAIR10_protein_lists/	TAIR 10
Homo sapiens	KinBase	http://kinase.salk.edu/kinbase/FastaFiles/Human_kinase_protein.fasta	Nov-2012

Sequences of novel gene models

>*Ostreococcus tauri*|Ot03gTAP42 Chromosome 3 - 14703: 15716 sequence
ATGACGCGAGAACTCCCGCTCGCGGCGTTGTTCGCGCGCGCCGATCGCGCGGACGCGTCGGTGGAGACGTGTGAG
GCGTTCAGGGACGCCGTGCGCGCGACCGGGGGACTGGGACGGGCGGAGACGTTGGATGATTTGGATCGCATCGGG
CTAAAGCTTGCGCTGGGGCATCGATTGGCGGGACGCGCGCACGCGCGATGCGGACGCGATGGCGTCGAACGGGCG
ATCGATGCGTTGGAGGCATTCGTCTCGCTCGTGCGCGAGCTCGATGGGGTGCCGCGGGAGGAGATGGCGGCGTGC
GAGGGAGAGGAAGAGGGGACGTCGCGGCGGGCGCGGGGCGGAGACGGACGCGCGGATAAAGTGCGCAGATTTAAG
GCGAAAAGGCGGTGTGAGAAGAGAATGGAGGAGATTGAGGAGATTTTGAAGCGACGATCGAGGGTGGAGGAGGAA
TCTGGGAGTGAATCCGCGTCGGAGGAGGATGAGACGGATCACGACGCGCTCGAGCGGGAGTATTGGATGAAACGC
ATCGAGCTCGAGACGTACGAGACTTTGGACGAACTCCCGAGCCTGAGAATGGAGAGAGAGATGTTTTTGAGACGG
GATGAGCTCGAGGAGGCGCGACGGGCCGAGCGAGAGCGCATGGACGCGGATGAGCGCGTCGGACGCGACGCCAGG
ATCGAGACGTACACGATCGAGCGCGAGGACGTGAACGCGCTCGCGGGGCCGTCCATTCTCACCGCCGATCCGCGC
ACGAGATTCCGAACCGAGGTCTTCAGACCCACGGTGGCGTTACCCACGATGACGGTCGAGCAGTTCGGCGAGATC
GAGCGTCGGGAGATGCTCGAACGCGAGCTCCGCTCGGCGGAGCGCGAGCTCGAGCGCGCCGCCATCCGCGCCGCC
AAAACAGAGGAACAAATCGAGGAAGAAGAGCTCGCCGAGACGCGTCGATGGGACGCGTTCAAGGACGACAATCCC
TACGGCTCGGGGAACTCCCGGCTCCGGCCGTGTTCGTAG
>*Ostreococcus tauri*|Ot03gTAP42 Chromosome 3 - 15342: 15716 MW: 14389.101
05/06/06 sequence
MTRELPLAALFARADRADASVETCEAFRDAVRATGGLGRAETLDDLDRIGLKLALGHRLAGRAHARCGRDGVERA
IDALEAFVSLVRELDGVPREEMAACEGEEEGTSRRARGGDGRADKVRRFKAKRRCEKRMEEIEEILKRRSRVEEE
SGSESASEEDETDHDALEREYWMKRIELETYETLDELPSLRMEREMFLRRDELEEARRAERERMDADERVGRDAR
IETYTIEREDVNALAGPSILTADPRTRFRTEVFRPTVALPTMTVEQFGEIERREMLERELRSAERELERAAIRAA
KTEEQIEEEELAETRRWDAFKDDNPYGSGNSRLRPCS

Sequences for proteins with adjusted gene models

The most critical gene model adjustment was S6K (Ot09g03470). The existing gene model contained a gene fusion and a frame-shift near the activation loop, which would almost certainly result in a non-functional protein. We compared the genomic sequence of Ot09g03470 to *O. lucimarinus* (OSTLU_3119) and found an extremely high level of conservation at the nucleotide level. We suggest that the two deletions in Ot09g03470, near the activation loop, are the result of sequencing errors as it is likely they would result in a non-functional protein. We were unable to find any reasonable splicing solutions which would accommodate these deletions and retain a functional protein. If these deletions were genuine we would not expect such a high degree of conservation in this region, and in the region of the potential intron (if the gene was spliced to the correct frame). There is a single copy of S6K in the *O. tauri* genome. It is therefore unlikely, given the high degree of conservation, that Ot09g03470 is a pseudogene. The following alignment shows the conservation of S6K in *O. tauri* and *O. lucimarinus.* The proposed sequencing errors, which resulted in two deletions, are highlightd.

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O.tauri|Ot07g02590          1 GAGGACTTTGAGATTTTAAAGTTGGTCGGGCAAGGGGCGTTCGGGAAGGTTTTTCAGGTGAAGAAGAAGGATTCGG  76
O.lucimarinus|OSTLU_3119    1 GATGATTTCGATATATTGAATTGGTCGGACAGGGCGCGTTCGGGAAGGTGTTTCAAGTGAGGAAAAAGATAGCG  76

O.tauri|Ot07g02590         77 GGGTGATTTATGCGATGAAGGTGATGAAGAAGGATCGGATCATCGAGAAGGATCAAGCGGAGTACACGCGAGCGGA 152
O.lucimarinus|OSTLU_3119   77 GGGCGATATACGCGATGAAGGTGATGAAGAAGGAACGCATCGTGGAGAAGGACCAAGCCGAGTACACGAGAGCGGA 152

O.tauri|Ot07g02590        153 GCGGGATATTTTGACGGCGGTGACGCACCCGTTCATCGTGAGTTTGAGGTATTCGTTCCAGACGACGAGCAAGCTG 228
O.lucimarinus|OSTLU_3119  153 GCGAGACATTTTGACGGCGGTGACGCATCCGTTCATCGTGAGTCTGCGGTATTCGTTCCAGACGACGAGTAAATTG 228

O.tauri|Ot07g02590        229 TATTTAATCCTCGATTTCATCAATGGTGGGCATTTATTCTTTCAGTTGTATCAGCAGGGAACGTTCGGGGACGAGC 304
O.lucimarinus|OSTLU_3119  229 TACTTGATTTTAGAATTTATTAACGGCGGGCACTTGTTTTTTCAGTTGTATCAGCAAGGGACGTTCGGGGATGAGC 304

O.tauri|Ot07g02590        305 TCACAAAGTTTTACGCCGCGGAGATTTGTCTGGCGGTTGGACATTTGCACTCGCTCTCCATCGTGCACCGAGATTT 380
O.lucimarinus|OSTLU_3119  305 TGACCAAGTTTTACATTTCGGAAATTTGTCTCGCCATCGGGCACTTGCACTCGCTGAGCATCATGCATAGGGATTT 380

O.tauri|Ot07g02590        381 AAAGCCGGAGAACATCTTAGTCGATAACGAGGGACACGTGAAGATCACCGATTTCGGTTTAGCGAAGAAGATCTCG 456
O.lucimarinus|OSTLU_3119  381 GAAACCGGAGAACATATTGGTCGATCACGATGGACACGTGAAGATTACGGATTTCGGGTTGGCGAAGAGGATCGTT 456

O.tauri|Ot07g02590        457 GAAGATGGTCG-ACGAATTCGCTCCCGGG-TCGATAGATTACATGGCGCCGGAGATTTTGAGCGCCAAGGGCCACG 530
O.lucimarinus|OSTLU_3119  457 GACGATAAGCGCGCGAATTCGCTCGCGGGATCGATCGATTACATGGCGCCGGAAATCTTAAACGCCAAGGGACACG 532

O.tauri|Ot07g02590        531 GGAAGACGGCGGATTGGTGGTCCGTGGGGGTGTTGATTTTCGAAATGTTATCCGGTACGCTCCCGTTCAAGGGGAA 606
O.lucimarinus|OSTLU_3119  533 GCAAGACGGCGGATTGGTGGTCCGTGGGAGTGCTGATGTTCGAGATGTTGTCCGGCACGCTGCCTTTCAAGGGGAA 608

O.tauri|Ot07g02590        607 AAATAAGCAGGCGGTGCAAAAGGCCATCTGTAGCGAGAAGGTTAAGGTGCCAAATTACTTCCAACCCGACGCGGTG 682
O.lucimarinus|OSTLU_3119  609 GAACAAGCAAGCGGTGCAAAAGGCAATCTGCAGCGAAAAAGTCAAGGTGCCGAATTACTTCCAACCCGAAGCCGTG 684

O.tauri|Ot07g02590        683 GGGTTGATTAAAGGGTTACTCGCCAAAGATCCATCGTTGCGTCTCGGTCGCGGGGAGACTGGCACCGCGGACGTCA 758
O.lucimarinus|OSTLU_3119  685 GGGCTCATCAAGGGTTTATTGGCGAAAGATCCGTCGATGCGCCTCGGTCGCGGCGACGACGGCACGGCGGATATCA 760

O.tauri|Ot07g02590        759 AGGGGCACAAGTACTTCAAGAGCGTGGAATGGTCGAAGATCGCGCTGAAGGCGATCAATCCACCGTTCAAGCCGAA 834
O.lucimarinus|OSTLU_3119  761 AAAGTCACAAATATTTTAAAGGCGTGGACTGGGCGAAGATCGCCGCAAAGGCGAATCCTCCACCGTTCAAGCCGAA 836

O.tauri|Ot07g02590        835 CGTTCAGGGTCAGCACTGCGTCGCGAACTTCGACGCGCGCTGGACGGACGTCGATCCCGTGGACTCGGTCGCCGCC 910
O.lucimarinus|OSTLU_3119  837 CGTTCACGGCGAGCACTGCACCGCAAACTTCGACACGCGATGGACGGATGTCGATCCCGTGGACTCCGTCGCCGCG 912

O.tauri|Ot07g02590        911 ACGCCCGTGTCCGGCGAGCAAGAAAAGTTTATGGGTTTCACCTTTGTC                             958
O.lucimarinus|OSTLU_3119  913 ACGCCCGTCTCCGGCGAACAAGAAAAATTCCTCGGATTCACCTTCGTA                             960
```

The following nucleotide sequence is the corrected sequence for the *O. tauri* S6K (Ot07g02590), based on the assumption that the two sequencing errors we inferred previously are correct. We have supplemented the nucleotides from *O. lucimarinus* S6K (OSTLU_3119) at these deletion sites, based on their alignment.

```
>Ot07g02590 a proposed corrected sequence based on identification of
potential sequencing errors. The two inserted bases (bold and underlined)
are proposed from the alignment with O. lucimarinus
ATGACGACATCCGCGAGCGACGCCGAGGCGCGCCGCGCGTGGGCGCTCAGTGGACTCGGATACGCGATCGCGGAG
GGCGATGGGACGCGCGCCGCGGCGGCGGGGACGCGAAAGATGGATGGGTTCGACGTGCGAGCGACGAGCGATGGG
ACGGAGACGCCGACGTTGAAGCGACAACACAGCTCCGGGGTGAGCATGCTCAGCGCGAACCTGCGACGGATCGAT
AGTGGGTTGTTGCTGGACGAGACGCCGAGCGCGAGCGGGGCGCGAGAGACGAAAAAGTTGTCGCCGGAGGACTTT
GAGATTTTAAAGTTGGTCGGGCAAGGGGCGTTCGGGAAGGTTTTTCAGGTGAAGAAGAAGGATTCGGGGGTGATT
TATGCGATGAAGGTGATGAAGAAGGATCGGATCATCGAGAAGGATCAAGCGGAGTACACGCGAGCGGAGCGGGAT
ATTTTGACGGCGGTGACGCACCCGTTCATCGTGAGTTTGAGGTATTCGTTCCAGACGACGAGCAAGCTGTATTTA
ATCCTCGATTTCATCAATGGTGGGCATTTATTCTTTCAGTTGTATCAGCAGGGAACGTTCGGGGACGAGCTCACA
AAGTTTTACGCCGCGGAGATTTGTCTGGCGGTTGGACATTTGCACTCGCTCTCCATCGTGCACCGAGATTTAAAG
CCGGAGAACATCTTAGTCGATAACGAGGGACACGTGAAGATCACCGATTTCGGTTTAGCGAAGAAGATCTCGGAA
GATGGTCGCACGAATTCGCTCCCGGGATCGATAGATTACATGGCGCCGGAGATTTTGAGCGCCAAGGGCCACGGG
AAGACGGCGGATTGGTGGTCCGTGGGGGTGTTGATTTTCGAAATGTTATCCGGTACGCTCCCGTTCAAGGGGAAA
AATAAGCAGGCGGTGCAAAAGGCCATCTGTAGCGAGAAGGTTAAGGTGCCAAATTACTTCCAACCCGACGCGGTG
GGGTTGATTAAAGGGTTACTCGCCAAAGATCCATCGTTGCGTCTCGGTCGCGGGGAGACTGGCACCGCGGACGTC
AAGGGGCACAAGTACTTCAAGAGCGTGGAATGGTCGAAGATCGCGCTGAAGGCGATCAATCCACCGTTCAAGCCG
AACGTTCAGGGTCAGCACTGCGTCGCGAACTTCGACGCGCGCTGGACGGACGTCGATCCCGTGGACTCGGTCGCC
GCCACGCCCGTGTCCGGCGAGCAAGAAAAGTTTATGGGTTTCACCTTTGTCTCAAACTTCATGGAGGAAGCGGCC
GTCAGGCTCGCATCGACGACGATTTATCCTCCGCGAGCGCGTCCGAGGA
```

The following amino acid sequence is the translation of our proposed *O. tauri* S6K (Ot07g02590) sequence.

```
>Ostreococcus tauri|S6K|AGC|Ot07g02590 We have removed an incorrect gene
fusion and resolved a frame shift error which affected the activation loop
(targeted by PDK1). We speculate there is a sequencing error (as there is
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no deletion in *O. lucimarinus*, which is highly conserved at the genomic level).
MTTSASDAEARRAWALSGLGYAIAEGDGTRAAAAGTRKMDGFDVRATSDGTETPTLKRQHSSGVSMLSANLRRID
SGLLLDETPSASGARETKKLSPEDFEILKLVGQGAFGKVFQVKKKDSGVIYAMKVMKKDRIIEKDQAEYTRAERD
ILTAVTHPFIVSLRYSFQTTSKLYLILDFINGGHLFFQLYQQGTFGDELTKFYAAEICLAVGHLHSLSIVHRDLK
PENILVDNEGHVKITDFGLAKKISEDGRTNSLPGSIDYMAPEILSAKGHGKTADWWSVGVLIFEMLSGTLPFKGK
NKQAVQKAICSEKVKVPNYFQPDAVGLIKGLLAKDPSLRLGRGETGTADVKGHKYFKSVEWSKIALKAINPPFKP
NVQGQHCVANFDARWTDVDPVDSVAATPVSGEQEKFMGFTFVSNFMEEAAVRLGTAGSRTAAEEDIDDDLSSASA
SED

The following amino acid sequences are the result of corrections to the underlying gene-models based on bioinformatics analysis. The corrected sequences are used for all phylogenies presented in this paper. Amino acid sequences that are derived from *O. lucimarinus* have been underlined.

>*Ostreococcus tauri*|Ot09g03470
MGGDAGTRSATTTRATVRILGDAASAVDVREAYAFGVELGRGQFGEVREVVDTSTGRALACKSISKRGLKSESSR
EMVRNEVRIMHHLAGIRRLVSVHEDATHVHLIMEKLDGPEWFDAITEQFDEAPYSEAEAAAQFRNVARTVEYLHA
MDVMHRDLKPENFVLKSKEKDSPICAIDFGLSTFFLPDQEFTELVGSPYYVAPEVMGYKYSNEADVWSCGVILYI
LLSGVPPFWGSSEKQIFDEIKRYKTGATSLDFASEPWPSVSDAAKELVQGMLTVNRKDRMTIEDVLSHPWLADPG
VAPKTALDNIVLQRFKNFAGMDKFKRFGLHAMARSMPEEEVIGLGVMFKELDKDKSGKITIVELRQGLKLQSAEA
AAQLEEVVASVDLDGSGDLDYEEFIVATIARSKRESRAAVQRAFDFFDIDGDGSITADEFQRALESLSPVERTNL
GDVNELLAAADTNGDGVIDFDEFMAAMSSDTDAR
>Ostreococcus_tauri|AGC|PDK1|Ot03g02170 Later start site and changes to splicing
MIQEQGELVTLPTKLDYFTDVHRSKDTRTIVELPPKEPSEEEDPPQGFARIFACCFAPKILCFTKFPSQPVVAVS
VNPPSRLGRSPGSAHAFVTARRLACRLAIERARTPPRTPPFEISDFVTVDVIGEGSYSDVREVFLSSRPSERYAL
KVMDKAHIVRESKSRYVATERTLLAGRLRECEHVARLMFTFQDTYSLYMGFELCPGGDLFWQLKRSEEGVMEETK
VVFYVSEVLVAVQDCHARGVVHRDVKPENVLIDASGHVKICDFGSALDLRHEVTSALTALASEKRCASFVGTAEY
VAPEILDGCEETTTAVDLWSIGIMTFQLLTGRVPFKGKTEYLTMQERTSTRLSANISESAKDFIDSLLTRDPKKR
LGYENETSIRNHPFFAAVDDWSELRSREAPRVLTATGVGSDATVTDSECDHDDGTDTDDEWRARVNAAAAALDAL
>*Ostreococcus tauri*|CK1|Ot02g06160
MSASNGGLELRVGNKYRLGRKIGSGSFGDIYLGTHIKTNEEVGIKLESCKTKHPQLLYETRLYKILQGGTGVPNV
RWYGIEGDYNIMVMDLLGPSLEDLFNFCNRKLSLKTVLMLADQLVSRIEYVHSKSFIHRDIKPDNFLMGLGKRAN
QVNIIDFGLAKKYRDPKTHLHIPYRENKNLTGTARYASINTHVGIEQSRRDDLESLGYVLIYFLRGSLPWQGLKA
ATKKQKYEKISEKKMTTPIEVLCKGFPPEFVTYFQVVRSLRFSDKPDYSYLRKLFRDLFIREGYQYDYVFDWTIL
KYQQTQALTRPTAGLGGQAQAGTSGDQGDQRDTLRRQTTLERQSSATRAAGGKEVLATERSSSFARAYERQRSSS
RPLTSRDDDGGRAYQ
>Ostreococcus tauri|TOR|Ot01g05130
MCAIESEGEDDKDVCAEGSGGNGGEERGRGDFLGFRNSVHARVGAMIGSADTAKKMGGLRAIDQLIDVEFGEEVE
KVRKFAEYVLEVMPPGGEERAQTKGEGARHPVDARNPLWGLPSAPQLIELMTAVIGRLVAHGGALTTDIVDSHVQ
RAVDLLETKEDNKEALSMKHYAAVRTLSELARNAPTIFNVHVQIVVVAIWSALRDPSLQVREAAVSALRDCLMVI
EQRETRYRVQWYYSLYESCRVGLRSESSVEAMHGSLLALGELLRYTGEFMLSRYREVAQTIFRLQDCKASIIRRT
IVLLIPKLAVFSPRRFAESYLVESCALILTTIRASSDSGAGFEALSQLADAMSHVINLSTISPEKADVGGVLLRY
LPEVSAVMYDLFTTRARDQQGTPEALKCAGSLMNSLNEAWKPHFMNLMTPMFMGDLSEALVSGLDFVAKSSPELM
PEIQMKLADSIESAISQGPETVTPNRKTVQLALRTMRTFPFEAVALLRAIKKNVVPYLSDSSAETRLEAALTCCS
TLRLRVGSSKSATRAVEYIMAALIPVAVGDTDASIRSSLLSDFCRPCASIDSYLGQAKSLRALFLTVNDESVTIR
MLGIELLGHLATRNPAYVLPALRAHMLQLLAELEFSSESLHREESAKVLAVLIRSCPRFVAPYLSAILNVLTATL
RADEGGSSATSTSTRESMTALKGRLQRTGSSGSGALTSSIPATLRKRRDVTGREKAAVLGTIGELANVSGSEIKP
FVQPLLALLLIALKSPSTRDEAVVTLGKLIESSGYVADPFTTHPQLLPQLLRILANERGIARNEVLRTLGCLGAL
DPYAHKANEIRLHGEGVLSADGVRGVRQASLKLAAGTGEDDILDEFLNNADGDDEIDVLPTLHLTSLSDEYYPTI
ALNSLLRILRDPTRTSHRLMVIRSIVYIFQVLDTGCVQYLPNVLPVMLNVIRTSDPSRREDMFVELATLVSVVKA
HIRRYLTDIFELMHLTWDVTGMSKNTILLCEELSFALNDEFRKNLPTIIPSVVAALGEAERLRKYDLVPHILHAL
ECFGVSLNDHLYLLMPPIMRLLKHSVISVPVEIKKCTLESLRRLLPIMNLSDQAALIVHSLTRVLDDERMELRME
ALCVLTSLEVSLGRDYALFLPVVKRAVSKCGVNDPAFDEMVKRVESGNVLLYPDEELETSSVVATARKKPDIQRR
LSVNQLAIRRAWESSQRSTKEDWLEWMRQLALDLLKSSPLPSLRACSELAQVQPNLARDLFCASFVSCWAELNES
HREVLVRSLEAALGSPTIPPEIVSILLNLCEFMEHDEKPIPVDVRTLGMIAERSRAYAKALHYKELEFVTNPGAC
VAAIIAINNQLQLPEAARGVLVYAQENLSVVIKESWYEKLEQWDDALEAYKRKMDEVMHVTTPNAMEERREAMAG
QLRCLNALAEWEEIHRISEIATKSNVDWDDYSIDVTTIATKAAWYLGDWEQMEVLTDKLERDQRSQGRLPTADRA
ELVSKHKTSVVNVTDCDFYKSIIAFRKGNQEEARTHLSAARDKLGTELPALVRESYDRSYRALIRAQQLTELDEV

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IEYAQLTAVASPAALQRQEVIRKMWRDRIYLVKRDVEVWQELLQVRSLVLPMSEETDIWLKFAALNRKQGRDRQS
RRTLLRLLGYDPMLCAEETAGFGAGSGRPKVMFAFIKHLWHTGQKRQAFMRLQSLAHELRVTWENQRSSGQPPEV
EHNKTVSRAFLKLGKWRWALTDCMNDETLTDVLMAFRTATAADQQWSKAWHHWALFNATAMEHFHRQGGASTQDA
MQHVAPAISGFFRSIALGGGKTNAKQGGSLQDILRLLTLWFNHGGTAEVETALIEGFGHVSIDTWLAVIPQIVAR
IHTHVIPVRNLIYQLLIRVGRQHPQAVLYPLLVACKSQSTSRRAAANAILDNVRQHSALLVEQAQIVSLELIRVA
IVWHEAWHEALEEASRLYFGEQNVDGMMAVLTPLHHILERQGAETLQEMGFVQNYGRELQEAHDLCQKYQMSKRE
EELNQAWDLYYHVFKRITKQLPTMTTLELQYVSPRLLNSRGLELCVPGNYISRATEQAKSEHGKDYGYLLKGHED
LRQDERVMQLFGLVNTLLNSNMTTQQKDLGIARYAVVPLSPNSGLIGWVPNCDTLHALIREYREAHKIPLNLEHR
MMLAMAPDYDHLPLVNKVEIFMHAVENTSGGDLAHVLWLKSRSSEQWLERRTTYTRSLAVMSMVGYLLGLGDRHP
SNLMIDRYSGKVLHIDFGDCFEASMYREKFPEKVPFRLTRMLVRAMEVSGIEGNFRSTCESVVTVLRDNKDSVMA
MLEAFVHDPLINWRLLTHKIVPDNDENEVQEVALRSSSASDSGNSTPQPKSRGAGSKRPPSVGVVDTPSGPVPSS
SSVIGVEAAHAMAAMSSSVRDHPSQAGSVLFRRTELIHALETYGMDDGANEALNERAVSVMQRMSAKLTGRDGEH
HHVDTMLPDTVEKQVRRLVAEATSAENLSVSYVGWCPWW
>*Ostreococcus tauri*|ABC1|Ot04g02190
MVHGGTVIVRVSDRARKSGSGKARRRRGRRDPYDDLRGEFDKPKLLRFFRRRPLQVAGRLATIIRVGRRVIRQWK
AQESWDPEERTRGAILREAMTRLGPVFVKIGQTLSQRPDLIGEEAADELKLLQQSNEPFPNALAWKTIVEDLEWD
GPIAPNHPYRARNPDAEPLFAKFSEQPIAAASLGQVYKAKTWDGQDVAVKVQRPKVVRQVALDWTCWSLSLSTLK
RLWGTTTELDVIADEVGQGVWQELDYTQEAAHMDEFNERHKWLGFVRAPHWLPEYTGPPGRARIITTEWINGQHI
AALPPEKKLIMAQMAVEACVAQLIYTGFVHADPHEGNMMLDDNDMLVFLDFGLMSEVEPFIMEGFAKGIQHMISG
NWEGLVLVFQEVGFTPKEGFLKRDDRSDTYKPATLEEMTKAVADTLSTEEGGQSRFGALATGLAKLSANFKFLTP
PYIILLIRTFLTLEGIAEKADPDFNIYTAALPYAIRRAMAPSTPEGQIAMRNTFLNESDELRWDRIEELVLTDTV
DEDDSKESADAENAEGAFGDSQALMARRSKEVVGRLLGSTEGVALRRVANSANTEKIVEYLSGPKGTALRAKSIR
MLSRNLKDLWTARRFVRRATPQIDSLPVWPESDEARRIRERQDRAQKRALAFIFGTHMARLIRKPWLLVRALTVT
AYIVVTAFVYALAVTVWDYLKWLNRFTPWGLVWRLASRGAPSGPS
SDALGSTSVP
>*Ostreococcus tauri*|DSP|Ot16g02430+A4S8J9
MPHVVDSDDDAPPPRAAWCRACGHDHAPGTTCGVCGHHRRVDDDLDDLPRPRLGHDEPIIEVIDKFLCLGAFEHT
SKEDVLLACGIRTVMNAVPECTPCCSSKNICVFTAPVKRGCSTTLDLGETVKKLEALHARAMRADEAGAANRVLV
YCMSGQSRAPSVAVAYLMYSERRRMDDALKALQRRYPRGYNGVTIKQKDVDELKMFEAELFPPGAS
>*Ostreococcus tauri*|Actin|Ot16g00370
MADEGEVSALVCDNGSGMVKAGFAGDDAPKAVFPSIVGRPRHHGVMVGMGQKDCYVGDEAQSKRGILTLKYPLEH
GIVTNWDDMEKIWHHTFYNELRVDPAEHPVLLTEAPMNPKANREKMCQIMFETFNVPAMYVSIQAVLSLYASGRT
TGIVLDCGDGVSHTVPIYEGYALPHAILRLDLAGRDLTDYMVKILTERGHSFTTSAEREIVRDIKEKLAYVALDF
EEEMATSQSSSSIEKSYELPDGQMITIGSERFRCPEVLFQPSLIGMENPGIHETTYNSIMRCDVDIRRDLYANIV
LSGGTTMFPGIADRISKELTALAPSSMKIKVVAPHERKYSVWIGGSILASLSTFQQMWIAKSEYNEAGPSIVHRK
CF
>O.tauri|Ot12g01390 New Gene model Tubulin alpha subunit gene model 201785:
203233 MW: 49240.094
MREVISIHIGQAGIQTGNSCWELYCLEHGIQPDGQMPMDGSAGQEDDSFNTFFSETGAGKHVPRCVFLDLEPTVI
DEVRTGAYRQLFHPEQLISGKEDAANNFARGHYTIGKEIVDVALDRIRKLADNCTGLQGFLVFNAVGGGTGSGLG
SLLLERLSVDYGKKSKLGFTIYPSPAVSTAVVEPYNSVLSTHALLEHTDVAVMLDNEAVYDICRRSLDIERPTYT
NLNRLLAQVISSLTASLRFDGALNVDVTEFQTNLVPYPRIHFMLSSYAPVISAEKAYHEQLSVAEVTASAFEPAS
MMAKCDPRHGKYMACCLMYRGDVVPKDVNAAVANIKTKRTIQFVDWSPTGFKCGINYQPPTVVPGGDLAKVQRAV
CMISNSTAIAEVFSRLDHKFDLMYGKRAFVHWYVGEGMEEGEFSEAREDLAALEKDYEEVGASSAAEGFEDEY
>O.tauri|Ot08g03630 New Gene model Tubulin alpha subunit 601890: 603406
MW: 49658.703
MREVISIHIGQAGVQTGNSCWELYCLEHGIQPDGQMPSDKTIGASDDAFNTFFSETGAGKHVPRCIFLDLEPTVI
DEVRTGAYRQLFHPEQLISGKEDAANNFARGHYTIGKEIVDLALDRIRKLADNCTGLQGFLVFNAVGGGTGSGLG
SLLLERLSVDYGKKSKLGFTIYPSPQVSTAVVEPYNSVLSTHALLEHTDVAVMLDNEAVYDICRRSLDIERPTYT
NLNRLIAQVISSLTASLRFDGALNVDVTEFQTNLVPYPRIHFMLSSYAPVISAEKAYHEQLSVAEVTNSAFEPAS
MMAKCDPRHGKYMACCLMYRGDVVPKDVNAAVASIKTRRTIQFVDWCPTGFKCGINYQPPTVVPGGDLAKVQRAV
CMISNSTAIAEVFSRLDHKFDLMYAKRAFVHWYVGEGMEEGEFSEAREDLAALEKDYAEVGASSLSTGYEEGMDE
Y
>O.tauri|Ot05g05090 New Gene model Ubiquitin-conjugating enzyme 800704:
801366 MW: 17131.406
MSDKDKAKSLSNSARRIQKELAEISLEPPTNCSAGPKGDNLYEWVSTIVGPSESPYSGGVFFLDIQFPPDYPFKA
PKVTFRTRIYHCNVNSSGQICLDILKEQWSPALTISKVLLSICSLLTDANPHDPLVGSIAQQFLNDKENHDKTAQ
EYAQG
>*Ostreococcus tauri*|SNRK|Ot06g03970+A4RZA4 (NB incorrect n terminal
sequence removed before genomic gap)
MEGGEDSGTHASGGASRGQAEIYLPNYRIGKTLGIGSFGKVKVAEHVLTGHKVAIKILNRKKIKAIDMEEKVRRE

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IKILRLFMHPHIIRLYEILETPHDIFLVMEYVKSGELFDYIVEKGRLGENEARHFFQQIISGVEYCHRNMVVHRD
LKPENLLLDSRNNVKIADFGLSNVMRDGHFLKTSCGSPNYAAPEVISGKLYSGPEVDVWSCGVILYALLCGSLPF
DDESIPNLFKKIKGGIYTLPSHLSPGARDLISRMLFVDPLKRITMAEIRQHPWFVVHLPRYLVVPPQTQISQTSN
LDGETLDMVVNLGFEREPLISALQHQVRNKATVTYYLLLDNRRNIYGGYLGAEYDDAEMMAEHNNMRGHGVASAL
GVRRPSQIQSHMMQTRLVAEQRWMLGTASKMGAQDVINELLRVLRAMNIAWKKNGPYNMKCMCVFHPDNDGEMDA
GDYGESDAMEADAGDVSMATRSHAPGNAREPSVLKFELQVYKLPNDRLMVDYQRVEGGVMVALDFAAKLMTFMNL
Q
>*Ostreococcus tauri*|*CMGC*|Ot13g01150
MDTANGASGPKGVGGRDDADENARIRARARRVSEPESASEALDGVALFRELKRDARAALCGSVVECEYERGDVIV
RKNEVGTHFYVVAHGCVRVDASEVGTRTGDYAGEASGEDDERRRHESRTRESSSSEREDASPMGGIALSYKLLYP
GDTFGEVALVRKCPRTATVIAESSSVKLWALDRATFQETVKRTTFERRCRLTSYLDAVEVFRESLDARTMSMLVD
ALREVTFESGHVIVSPDDVYEEESSKFYVVIDGEAVVYVDDGSKAEVNRLRRGDYFGELSLIHKTSPTAMVIAVG
QVSALTLDAESFYRMIGEKTVKLMARRIDSYTHTANKAERKLSKSCLSRCAGSFAALRGAMTSPFGWLSFDRRHA
ERQKISLNEIKRGRQTTSKKLSVDFDVHSSKDVLFVKEIGSGMLGSVFIAKTLNTQETCCVKVMHKWKIAHLDQE
KNVCRELEIMKRFDSPFLTRAVGAFQDARSLYLLMDYLPGGDLFQLLVSGPYRGGRFPVNVAQFYAAEVFIALEY
IHTEEYVYRDLKPENVLLDACGHVKLTDFGFCRHLLPGERAYTTCGTADYMAPEVMLAQGYDQLADYWSFGVLLY
EMLVGYAPFASVSDGVRHRRIISSDLKFHSTYFSLTAKSLISRLCVVDVSKRLGSGARGSGDLKSHDFFRDLNWE
DVTARRIDSPVRPPVRDRVSADVGSVGRHRSRELLRALDRACERERRERGAGSSAQSADFVGF
>*Ostreococcus tauri*|HSP90|Ot10g01300
MSEDTETFAFQAEINQLLSLIINTFYSNKEIFLRELISNSSDALDKIRFEGLTDKSKLESQPELFIHIVPDKTNN
TLTIIDSGIGMTKADLVNNLGTIARSGTKAFMEALTAGADISMIGQFGVGFYSSYLVAEKVVVYTKHNDDEGYRW
ESQAGGSFTVTKDASASELGRGTKMVLHLKDDQLEYLEERRLKDLVKKHSEFISYPISLWTEKTTEKEVSDDEAE
EEGEEEEGKITEIKDDEVKEKKTKKVKEVSHEWAIMNKQKPIWMRNPEEITKDEYAAFYKSLTNDWEEQLSVKHF
AVEGQLEFKSVLFVPKRAPFDMFDGKKKANNIKLYVRRVFIMDNCEDIIPEYLGFVKGIVDSEDLPLNISREMLQ
QNKILKVIKKNIVKKCLEMFNEIAENKDDYTKFYEAFGKNLKLGIHEDAQNRSKIADLIRYYSTKSGEEQTSLKD
YVTRMKEGQKSIYYITGESKKSVENSPFIEKLKKRGYEVLYMTDPIDEYAVQQLKEYDGKKLVSCTKEGLELDET
EEEKKQKEEVAAQYENLCRLIKDILGDKIEKCIVSDRVVDSPCVLVTGEYGWSANMERIMKAQALRDNSMSSYMS
SKKTMEINPDNSIMKELRKRADADKGDKTVKDLVLLVFETAMLTSGFSLDEPTTFGGRIHRMIKLGLSIDEDDAP
VADDLPALEEEVDEGSRMEEVD
>*Ostreococcus tauri*|CCA1|Ot06g02530
MGDQGEAPSSNDTGDEATVTTNDATSDPTTTEGKAVKTRKPYTITKKRERWSDEEHALFVESLKKYGRAWKR
IEEYIGTKSAVQIRSHAQKFFAKLQKEQIVASGSEGSGSTRKRGADRSTSQSKRSKSSYATDINLEIPPARP
KKKPAHPYPRKATSQQPSGGSGERDNSGGTGKSSGTAQKWPTEASQEFIASTSSSAAIAAVLSVACDKMQNN
LHQELRQGYFGIPTGMQPQQGMFAQPGMFPMNAMMSPFVAMNTVSGAPTPPPMTNPQQFLNYANFFSNYWPQ
FANAANANAVNVMFQQQQQQQQQQQQQQHKQRAGGETK
>*Ostreococcus* tauri|Ot08g01530 New Gene model Clathrin-associated protein medium chain 6489: 7916 MW: 48257.875 Patched from Ol08g01410
MGVDSLFVLNNRTESLVAVKHWGAITSSEICERVFEARRDSARNGVEGDACVADQDSYGFHISRGEITYAATCSR
ETSPLLMIEFLSQLYDVLRAYFGDSVTEAVLQEHHVTLYQLLDEMVDSGVPVNMHAGGLKVLVPPPNLYNRVTST
VMGNQGIIVSDQDPLKLLPLPWRSNNIKYASNEIYLDLIESIDATIDAEGKVLSSAVYGSIEVNSRLSGMPDINL
TLSNSHLIDEYNFHPSVRVSRFASDRVSFRPADGKSVLMSYKTANSDNPSSVPLPLYIRPQSAFGASHGRVSVVV
GSKPAFEKPVESVSLDVRLPSRVLSADPSATHGEATFDVASNTVRWSIPKFPPDKTPCLSVQVNMRDEEEEATPS
AGSKSDGASRRVHLQEVVDITASFKVPGAGVSGIKVETLQVRNEKYKPTQGVRYHTKSGAVVVRT
>*Ostreococcus* tauri|Ot09g03910 New Gene model Ubiquitin C-terminal hydrolase UCHL1 PEP - 591196: 592154 MW: 31038.566
MPKKWLPLEANPDVMNAFAHELGLSPSLAFHDVYGFDDDLLEFIPEPCVAVLMLFPLTPRTESVAGVDAPAPDAV
SSVWFARQTVSNACGTMGVIHAALNAKDAVVPGSRLESLRAACEGSDPDARARVIENDDALEAAHVCASTEGQSA
VPNADEVIDLHFVALVERDGGVWELDGRKPAPVYHGATTGSGLLRDAVPVIRKYMEAAEGSIHFNAIALAAKVEN
TCRYGEMRRARDVEATGVRASATRGRWMPHRVGVFRSGGAPRQMMERDIMQTPMGARWMSWC
>*Ostreococcus* tauri|Ot18g01040 14-3-3 9384: New Gene model 10456 MW: 29085.895 [Ostreococcus tauri]
MSGDGDDDARALSREDLVYKAKLAEQAERYEEMMDCMSEVTLKSGEEELSVEERNLLSVAFKNVIGARRASWRIV
SSIETKEEAKHGKDSDKCKLIASYKANVEKELTSICTRILDLLKNHLEDRCSAGESKVFYKKMKGDYWRYLAEFK
GGAERKEAAEETLLAYKSAEQTAEAELQSTHPIRLGLALNFSVFYYEILNAPERACQMAKKAFDEAISELDTLGE
ESYKDSTLIMQLLRDNLTLWTSDMNDSQATGGAEEEDDE
>*Ostreococcus* tauri|STE|MAP3K |Ot13g01170 New Gene model MAP3K 2869: 4821 MW: 69682.43 [Ostreococcus tauri]
MSCFRPATTVNEDGETSETTCASSFVAMMSRARRAIVGRGGGSAEVARNASAQSASGRDAQTTSAETNASGGGGE
GASIDGEISAPRLPGLRLTPAGRVLAAAAAAAASGRDRGPDAEMNDEFGGMRGDPEVEETPLPLPPPLGDIPRAH
GGVVGKIKGQILPSSGYVPLEVQTHAEKVRLIQQQERTRRSHSITDAAVTTTAKTAGAAVGAISKMAAKLKESRH
FKSASAPLTAVEIADDAPAARESHAEEAGEANARSAHTEPTSNPFVQDESRRPGRNSSELSDSGVPSSPHHRRAS

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SAGNWSDMSYTTSDDGMLRMCHTSLAPTKPRRWTKGDNLGEGSFGSVWLALNGDTGELFALKEVRFGSSDKHREE
SIEQLEQEVDVLSRLVHPNIVRYIGVTREEAALYIFLEYVPGGSIASLVHRFGKFEENVIRVYTRQLLIGLSYLH
SQRVLHRDIKGANILVEKSGRIKLADFGMAKVLENVSHGKSFKGSACWMAPEVIRQKNVGFEADIWSVGCTVYEM
ATGAPPWSDCSTQVQIIFKIASSEEIPVIPEHLSPDGQDFLRLCLQRDATRRPEAVALLDEPFVVDAHRSSNATN
IPGLQYDTWASSSVLSFRDDEASVRSGDGTVGGMRSNQSSMRHVAWGDLE

>*Ostreococcus* tauri|TKL|Ot11g00940 New Gene model TKL CTR1-like 169582: 172309 MW: 100334.7 [Ostreococcus tauri]

MFSRSNSDDVVEARAHATANAPDRDRIVGVKHEAASTRDSFVREVRDGENGSRATDDDASTSGDARDGGGEGSEE
AGNVNGRSGRERGQSEGANAGRMALNARRPSRDHERTPNKFLPWLSNTPTLDGTLEKRQETEGWWASLFGGGTEQ
WGLRYFLLYDTHLFWGKGFSTMHGYGTVLSVREVPELGPTSFAVEMMAVPKRNLRRSFNDNVNFLDLISGLCCKP
AGFRVMYLRATSPKEMQRWMEGFCRGTSDTPVSTRMPLDFSEEIPPSPRISTDSELSIDTFSGTGTRTRYEEPPP
PLSPGGASREFLNTSPETEDVPLFRLDANGESGEFNHSTQQKSPVRTRSVLKSNSMLRNHEQRQSVDGNCSKSVT
FDDHVESVVIARSPVKQQGIVPAQETDREFRTRTRLLKAAGSFKISESELQIGAKLGIGSFGVVYRAKWNDTDVA
YKVMLQDKMNYETVNAFAEEIRMMRGLRHPNIVLFIGAVIQPNRLGIVSELMKRGNLEFLLHGNSTMGRQLRENG
MLRRQMAADCARGMLYLHSLSRPVVHHDLKPANLVVDSNWTLKVSDFGMAQLKSYTYDSVSGAPGGTPEWMSPEA
LRGDKANERSDVYSFGVILWELMTVSFPWAELSSPVQIVAQVAFLHRRLKVPEWIEKPMADLLHSCWAREPEERP
TFEKIVEQLAGEYPQAWSLGQVDKSADEQAANILAMMSTGKGASSTEADSADSSNEEEFVDNVVEVSVISAFAPR
GLKPIRTPTPVTDVPKQTDTLDTEEDSSEESNSLDAPNGRASASANGTVMTTVNEFRPRLLRSRRRAPSSRPRSP
PSQTAPAIDAVRCIITSHPSRALKIALGAVTTNWSTPAVDARPPARTARRSAQKPPAPLSTRTASRARASPARSW
IPRCSRPR

>*Ostreococcus* tauri|Ot12g02970 New Gene model Histone H3 (Lys4) methyltransferase complex, subunit CPS25/DPY-30 (ISS) - 470097: 470484 MW: 12800.328 [Ostreococcus tauri]

MDDARCARSRARSIPRRDGTSDGRDVRGAAIGFLKRARRAEDAPTPSVPREDEPKAAEPSAEDSNERGESVKAYL
EETVSKTLHDGMMRLANERPSAPLKFLGEYLLEKSRERGE

Sequences for proteins with patched gene models

The following sequences are gene models that have been patched from *O. lucimarinus*. Amino acid sequence was transferred from the most similar *O. lucimarinus* gene to gaps in *O. tauri* where there was a high degree of conservation in the surrounding region. These sequences were used in phylogenetic analysis throughout this paper. Amino acid sequences that are derived from *O. lucimarinus* have been underlined.

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>Ostreococcus tauri|Ot10g02860+A4S411
MDGERRARDDDDARDARSGGTRASASADEDGTNKSFDFAGCSQSQRDERRGATRGTARSQGNGESQEFGGPDFIT
PADAQFDAYGGYEDKENFRGARSPCALSPARNKRPRFGLDLGASQGTQEFASQPLDATQPSQSQGEFGGGFRVPR
NREPTRGVGSRSGLPRAATSPPCARNAFLPDDEQPPETSAHARRANCTSAAQLATMSRFRADFVDLGCIARGGFS
KVHKVIGRLDGCRYALKRTSEQLKNERDRSEALREVHVMASLVTCPQIVRYHSAWWENDHLYIHMELCEEGCASR
MVDSRDGERMNDAQLARCLRDISTALAFAHDRGLAHMDVKPDNIFICKEGFKLGDWGRATQLSGARRSSAVDEGD
ARYLPPELLNDNFDNLDRSDVFSLGASLYELAIGTSLPSHGSDYQALRQGVVPTGAVAASLHALCVAMMSPIPLD
RPSAADVLSKHCTL
>Ostreococcus tauri|Ot07g04140+A4S0Q4
MGAPRSPGGARASDDDARGRPSAPDELKNYEKLGRIGEGTYGVVYKARCRATNEIVALKRVRMDRERDGMPLTSL
REIKILQRCAHENVISLKRVIQGETPSNVFLVFEYCEHEMARLIDFVKTKFTTSEVKSLMMQTLRAVEYLHERKV
FHRDLKLSNLLLNQRGELKLCDFGLARTYDPIEAGIYTPKVVTLWYRAPELLFGEEQYTAAIDMWSCGCVFAEFL
KHAPLFPASTEIELMQMICALLGNPNSNIWPGWDSLPHARKFKLPEQPYNFLEINFPKLSAAGVNLLDVLLTFDP
EKRGTATEALAHPFFQESPPPKPPAEMPTYPSTHSAPERGAERRNAKRSRGALDERIGAVF
>Ostreococcus tauri|CMGC|Ot01g05560+A4RRZ9
MRKKERAAPAGDMFGEDSDEEAFYLRDASGEGEGGDGAKVTGGAVDMSKGLTDNWDDAEGYYCARIGEVLDGRYT
ITAHLGKGVFSNVLRAVDKREGEMEVAIKVIRCNQTMHKAAQLEIDILQKLSGSDPENKRHCVRFLRHFEYREHV
FMVFESLSMNLREVIKKFGRNVGINIRAVQAYATQLFIALRHLKNCGVVHADIKPDNILVNETKSVLKVCDFGSA
MFDGDNELTPYLVSRFYRAPEVILGLPYSHPMDLWSVGCCLYELFTGSIAFPGRSNNHMLKLMLELKGPVPQKVL
RRALFTENHYDHTGAFAVIEEDPVTKKSIRRLIRDAKPTKDLTKIFTRDSDMSDGERK
>Ostreococcus tauri|CMGC|Ot07g04140+A4S411
MGAPRSPGGARASDDDARGRPSAPDELKNYEKLGRIGEGTYGVVYKARCRATNEIVALKRVRMDRERDGMPLTSL
REIKILQRCAHENVISLKRVIQGETPSNVFLVFEYCEHEMARLIDFVKTKFTTSEVKSLMMQTLRAVEYLHERKV
FHRDLKLSNLLLNQRGELKLCDFGLARTYDPIEAGIYTPKVVTLWYRAPELLFGEEQYTAAIDMWSCGCVFAEFL
KHAPLFPASTEIELMQMICALLGNPNSNIWPGWDSLPHARKFKLPEQPYNFLEINFPKLSAAGVNLLDVLLTFDP
EKRGTATEALAHPFFQESPPPKPPAEMPTYPSTHSAPERGAERRNAKRSRGALDERIGAVF
>Ostreococcus tauri|CMGC|Ot09g02480+A4S2P7
MTRSSSDTSSSDARDVDDVDSRSASSSDEDEGTDGYKRGGYHPVSIGERYNDDRYVVVKKLGWGHFSTCWLVEDV
GSGREMNGKVTYRALKIQKSSGSYTEAAKDEIEILTQCKDQAASAEERELGSDNVVRLHDHFTHQGPNGTHVCMV
FDVLGDNLLTLIKRYEYLGVPLLGVKALTRAMLRGLRYLHDVKNIIHTDLKPENVLLTLALPEKKRGRKSKNKVV
DPRKDVKAGTPTLVDQIERLDVASSKRESGQVENDTSKETNSEDDIDCVDLLPYSLLKRLDAKICDLGNACWVDR
QFTQDIQTRQYRAPEVILGAKYDTSADIWSLACIVFELATGDVLFDPRSGKDYDRDEDHLALMMELVGRMPKHLA
LSGKYSKEFFNRSGELRHIRSLKFWPCERVLIEKYNMPEKDAKDLSDFLVPMLDFNPSKRATAEKMLEHRWLQF
>Ostreococcus tauri|CMGC|Ot09g00650+A4S284
MRALGVGLIHPKTVQSFCEQLLVAVRYVHSLGLVHTDLKPENVLLMSNSYRENATHRVPVDHTIRLIDFGSTTFI
DRHHSAVVSTRHYRAPEIILGLGWSYPCDMWSIGCMMIELLTGEALFQTHDNLEHLAMMQHALSRTIPNAVVKRV
PKDKLRDLFNRNGALNWPNEKTDAESYAALGNTGVVRQLLEKHLSGEVLSLFADLVGKLLDFDPKRRITSKSAVN
HAFFSLDLKIDWRIMRNGDGRVLGVKK
>Ostreococcus tauri|Ot15g02970+A4S7Z1
DYDNRTPLHVAASEGSFAVADWLVKSGVTINPVDRWGSTPLESAVYGNHSDLVKMLAKNGAKIKDRVSGTFVPLE
ESHLSGVFHTQLPADTMAWEIPDGEFRTSKRLVPALGVVNTGMWPGTKVCLKQLHKHLNADEVAQAEFRLELKIM
QQLHHPHIVQFLGTTTSTEGLTSIVSEFMGGGSLEQVFRNEELLSLKLATQMALDCARGMAYLHGRSPLPVIHRD
LKPGNLMLTTNRTLKIGDFGLSKTLSVRNKLPQEMSQAFNMTGETGSYRYMAPEVFRHEFYGPAV
DVYAASMIYYQLFSFQQPFSGRNPVDACRAARLHAPRSRRLVTRMWDPIVKKRPDFTE
IIQILTPVAARYAAQPDASAAGPACCVVQ
>Ostreococcus tauri|Ot04g05350+A4RWS0
MRSSSTSRRAANDLARGTALGTHGRYEIVEMINRGGLDRVSRHQLHANLHPAALTTDALVLMTTEMVGLYFLSTV
LLVREQLPEEYRAIITEALGADLEFRFYAKFYELIFMASAALTVISLYAKHVTAASTVKVPLAARRAQIKYATRL
MGGNGSNAGVPGVVRLLNVVNHGEDVLVLVFELAKGVDALDYINQHGGRLDEDEARRLFAQLVEAVRAIHDLGFC
HRDVKPENAIVCEDGNLRLIDFGLAKGLESAKTRAVGTPDYMSPELLDKLDRDGKARTEKYDA
AACDVWSSGVFLFIMLTGRYPFQDPNRPNNVKATLQNIVKGNVAPLRVDVSDDVRDLLRCMLTPDPRKRITLKQV
AKHPWLSGSLGRRKKPSLVDRLKQSFTFRRATTSD
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>Ostreococcus tauri|AGC|Ot09g00870+A4S2A2
MCVEDFEPLKLIGRGAFGEVRLVRQKDTGEIFAMKKLKKSEMVRRGQVDHVKAERNLLAEVNSRAVVKLYYSFQD
DQFLYLVMEFLPGGDVMTLLIRRDTLTEEETRFYLAQTVAALETIHRHNFIHRDIKPDNLLLDKDGHMKLSDFGL
CKPIDPTYQQAVLPEILENESMGPSDPPPRTDEDSKRAEEVANWQKSRRRLAFSTVGTPDYIAPEVLLKKGYGLE
CDWWSVGAIAFEMLMGYAPFYSDEPLTTCRKIVHWRHHLRIPDDSPISPEARDLIERLLCDADQRLGTHGGVEEI
KSHKFFKGLDWNALYTMTPPYRPVVSHRLDTRNFEDFEEDDSMRKKSGTVEGEGAPKDENFIGYTYKNVEIVGEE
VKKLNIARPSLTSVFPTSK
>Ostreococcus tauri|MAP3K|STE|Ot11g01380+A4S4M0 (NB incorrect n terminal sequence removed before genomic gap)
MGRTKQRGKTLTLGEFFAETSTQRTSGLLGARLARAVDGATDGGDDGDDDSYAEFTVEIGNASVRCAEQEGSYDV
RAFAREGRNAGGKVIKSVTFVFGGKMGERRVTEAPFEVQYRCETSVDVEVAVQFHRALNARPVRELHAIELSSEE
REFSRSFAVEVKRRALMKVLGKDKGDAEVDVRRAESRSSLLEESQSRGVDAWTVQDVSEWLRSIELEELVERFAK
AKINGYELLRLTEKDLRESLHLERNLERVRAIRAINVLRASAGAADAENDDKSATPPLSAPLGAPRGGLSPLELE
LDVSWIEFVSEKARASVLIGWFMHVLDEVKAKEFDEPGPQLSVYCEATLQASKSCEDALEERVLDILESTPGWDP
RTKMFPSTCDLTKLNDQLMELYLEVKAFEEFAALNMDDDRGEHERSRSTPPKMPGESSPAIPRLNRAESLTTPSV
SGSPTFTSPRNDMGPSPSPSGLNVGARSFSPTPLSDLTRSSLPELQEDEVADGDRVMELNTEWEIDYNDIEFEGG
VPSSKNRIGHGGFGEVFLGRYHGSLVAVKKLFNQDMMGKGLQDFRREVRILSRLRHPSIVLWLGACTQAPNLTIV
LEYMDKGSLHQFLHRTTTPYTTLTLTRWAMTIAQGMVYLHSAKPFPIVHCDLNTNNVLVNRDGMVKITDFGLSKV
KHSSRLSRQTGMTGTVNYASPEVIRGGKFSEASDVFAYGVILWELLTRRIPWEDLNEYQIVFQMTSDLDASLAAT
AKNLELPASAPEGYRKIIHGAWATQPERRSAFKDVLGDLREVYREQVDIEKALRAARKGSTSSLSATSAPDK
>Ostreococcus tauri|MAP2K|STE|Ot04g04050+A4RWE8
ECGERDGFISECGERDGFILGAADLELVGVIGTGSGGVVRLATHKRTGEALAVKTIAISLARDENERKRIVTELR
TLHKSECDYIVRSSGAYFDRGSVSLVMEYMDGGTMSDATKYLGKWVEQDLAAATSMLADGLHYLHTKLNVVHRDI
KPCNVLLNLRGEAKLSDFGVSGHLTDASKCHSWVGTVTYMSPERIQGESYEYTADVWSFALTMVECALGRFPYNP
PDVSRRLVFWDLLDIVVQDPVPNLRPELDVSDEFDNFVALGLNKDPTGRMLTKNMIAHPWIFGRDRASDKRRIAA
LAARHLDARSKARERGEK
>Ostreococcus tauri|ABC1|Ot08g00750+A4S118 (second gap patched)
MPLTSRPLQTRENQPSNRIRSSRAPFQRLNHTIHRPRSLVRPIHLAQPHVHRVLLRLSIRIAPLSSSTNRRRRRR
ARVSSVQRPRRSALSHEHSLDRSHRSPARRPRPPRLFLPLRALTPVHALRERRHHTNQGRHVPEQRIXXXXXXXV
GRRTTGDADDDDGDGKRDARRRTGRGVHRRARRAHRSADPSRRSWNRFGLARLRPRRANRRLRKGLATTRERGTA
LAISGPPVIGKSLEEPIEAFNKVGFVGKLRFGLRAVGGAAKAFGVAAASATLRCWAPKVHGALTVMLVACASTKR
GGDGALVRFVEGKVPGKLGRACVRAMAAAPKSARGTLRRWATWQAIRLGMRLTARRQQRKVDYSMRVAPVIASYM
IAKRRIGRIKEVERRDVEWEKQHHWGAARMRDVIEDFGGFYRKVGQIAGTAKQMMPAPYIECFSKTMDNNPPVSF
RLVRRTLEEGLGGPLGLHFAELSRKPVATASIAQVHFGRLLDGREVAVKVQATDAAMMIGDIESMLSTTRAMRWL
GLDEGLDFPTIFRAYLDVIEEEFDFTIEASKMDEFRKVLDAAGLGDRLAVPQVITATRRVLIMRRVRGVKLLTLF
NRARATNKIPRCPSPVAQCHAVGGFGWQGVFHSMFMAWGTMMLKHGHFHTDPHPGNFMVAHDGKLILLDWGQTKR
VSEVERMHMCRLSLYMANEDHTNIAKEIRSHGSVRLERPTTEALSALS
YAYFDTRPSPLAEMNVMDFKNSPFVQNKILQNTQEGFFAIRSVFLLRGMLSTCALRMSMVQAWEPIARSAMILNG
EAPPSRFRLKTQFIINRSLLGFQRRFNVGAGARVNAVDEYMSTKRDKDEANGTLWPNSSSLF
>Ostreococcus tauri|ABC1|Ot03g01200+A4RU11
XPDALAPWRGELRYDVEAFEAYFKRRPMKVLRRALVVAYELGAIGLGVAARAGERRRRAQRLSETLARLGPAYIK
LGQVMSTRADVFPVEYVHAATSLETLERELGLGVDFFEKFHETPVAAASLAQVYRATLPGGQDVAIKLQRPGLAE
LVALDAVILRRFAGFVGYWRNFKSDVVGIVDELVGRIFEEMDYNKEAESCERFRAMYAPDGDAGVGLAGLVYAPR
VVDFLSTATVLTMEGIVPNEVLDRGLRASSSAADVGIMHTDPHPGNLIVAENGGLTYLDFGMTVEVPIETRRAMV
RGLIGFVNRDARGLVDDLKVMDFLPPNVDRAAAEEALRSVFAGESTTKVRNSNDFMGVVSQLSTALMKHGFRLPP
YFSRILRALAALEGTATTIDPSFRVVDRSYPFVLSRVLSDRSPEMRESLRRLLLAEDGSIRYKRLIRLIRAYGVE
ATPMASSETETRSDCRQALDKTIAGLSELASGEKESLSGEDEARRATKTAMEDALRFLLSDRGESTRERLIDDFI
AAFEALLDEDSGSKTDIPEGRFTVDDAIGAAKSAATAVGDNPDLWIPVLGRAASERETLAALRASSRVAYDRLIK
LRASRRSLGRAPCEDAKELVRKVVHALSAPKSPETQPTRDSSV
>Ostreococcus tauri|AGP-like|Ot06g01800+A4RYP1
MTRTTDGTRGVADASREGWTTRARGASGRRRTVGERWALDDATLGRGSFATVWRATCVKTGAVVAVKEIACERLS
KKLRESLKLEVEVMRRMRDENILRFIDMQSSNETVYIVLEYCAGGDLSQFIRRNGRMNETSARRFMLQLARGLKA
MRKAQLVHRDLKPQNLLLTSNDLNAELKIADFGFARYIRDSEGMADTVCGSPLYMAPEVLNYQKYDAKADLWSVG
AILFEMLVGTVPFTGQNQVQLLRNIQKTEFKIPIHIAEDLSPACIDLLRGLLHRNANDRISFEDFFNHPFLKSGD
TVGVGIPSKSGATKSQAQESDGASSADSETMPFNMDVESNSPSPTSTTRVNGQPQERTIS
QPVPMLSRQSSASGKMSIASDYVLVSSPGTSIPRSMRPPSLGSSPLSRMSLSPNDGSPGTFGGRARMSRGTSPSS
QPMTLATRYQTQSQMLVTQLGVRVGVLEKAAVVLRDTSTEHWNVGNKLAALSLGLVSLAALRSAHRLASEIVTTE
QKSSVNLSGTSASASSGNSSPTGGNSMAMSAKKATVRIKEAYQAAHTRAEKAADACRAAGFDMEAQLPDGMELVY
ENVCKLAKDGVREELAENKQVALDIYGRAQTLLQFLIGEGPSLHITPPLVIDGTTHARLSSLSATVASRQQSLVR
LMRGVR
>Ostreococcus tauri|Ot08g01230+XP_001419308.1

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VVYEILNRLPFNEVLRPYESELLDLALESLREENEKNALLCLRVIFDLHRNFRPTMDKRVEPFIRFVHDVYEGSG
VTIDELLGSSGSTRKRGKSEEKLPAPCELPSHKSFKVMMECPLIVMLVYQLYNRDKFIQQEVEKMIPLMVKFTGL
QTIDIDSMSAGQREFSSDLKSAQVKTIGFITFLLRGNSVFVEPHHEEISNAIVSLLRTCPDVVATRKELLIATRH
VLSSPPLCKGFFQHLDLMMDEDVLVGTGRMCIENLRPLAYSFLAELVHHMKAELTLEQIRRAIHIFSRNMQDETL
PLSTHMTCVRLMHHLVESVFRMRTDASRATEAREFLVRIMYATVAKFRTLRPNIPELLKTASGLEAAVKAKASKR
SKDAKADGVAETGATETPNKSASEKKESSDDPEPDLPSHEKLRSLSDNKAIIKTLTIGMKTLLWSITNFNGSESV
DIGLNRSEIKRASGFIRNGVKCMQLFNGTECTEMCTHFSEALLVLEPRNFVDMMSLHFDDFFAGMLELPTMVQVP
HLLLQNTKLCRYFADAAMTYLLEKKLECLRDQSSQEAQLVLKLFSLLLHAISKHSHCESVLSTHVIFMMDACLKA
IRENDNPSAYVRLLRYLFRAMAQAKFDVLYQEVVPILPATLDCLLAMLNGPDPLELHDTVVELCLILPARLSSIL
PHLPKLAMPLCRALRAHANELNLLGLRTLEFWVDSLNPEFLDPCIAEVESELMLALWAMLKPQQSGSPFGAKAMQ
LLGKLGGRNRAFLKNPLKLDAKSNPEHGLRMILMFKPDTSFLVPLDRCIPSEALVRHRRQALTFIRTCLVSILNL
SAARALYGTVEEIESALEAAISNGWGKKCEAMTGVEATPQLGNKTKGQLVAEQNIFKRLVVTVIAAECDLSLKET
DEKFMDNVCEHVALLFVNSATCTPGEDTDNMDHDSVERPRATNLKVLETTLFLDALMTSFESTKQIYLTATVKAL
ATFLDAVLILSRDELQSLQTADDSLEKQRTPKSKSKKKTDIHDDESPYPILASLVEAVLPRFVHCCYKREPHSII
GGVEGFNLLIERLPTSIWRRRLPDILSANIRAIQLLPAHAPAQKKRVEQVFLQLVEKFIPAEVSPRGDDAPTGVD
AGVSVLVDELCNLSSTCASRAAIERALLGISERTSTPMDTVLSITDEKLMTVFERPLLTRHVLSQIQTVKLINFC
LNASPHLITFRDKWENNLRAFINEALTIAEVEDPTIMSVETRENEAMSTLRQSCVQLISSALKAPEFSDADTAEE
LTVIRERISTVLFTSLTSRNKVIVEIAKKGLVEVKPYMNKNTLKQSVSPILMNLQHLSKLSVPLLEALEYLLELL
AEWFSPTLGEKLLEHIKYWIELDFSAPAVPGQLRKSPKDAKLIAAIVNLFHLLPKLRDKNELKPNEKRLLPFDFI
KPLVRDIMVIESTMPPASVYSSAHSLFIVPLTKFLNRYPKESVAYFLARLDQPEHFARFVSILKLPEAADLLKTI
TSSSSKLLHIIFGAGKGEMDEIDKIAVEGVEPIEDTKLAYYNGLQLLATIAKLKPDWLPKEKAILKQLNECWDSN
DRAATLSDESKVSLPAMMETKYLAKCFLSIVKNDHSQVEILFKIISVLCTRSSVDFTFVREFVKNEVVERYTPAE
RNAVLKQFLKEFAEQLEAIEDANPDHVTCSLKVMVNPMLEKSLTDGRDDDGEPSDKLLEIVTDDFVSELVTDVFE
PSDGGNDALYTESVLIQLLQLSTLLIRYVPKTLVDHRKELIKFGWNHLKREDSSSKQWAFVNISYFLQHVVALLR
AYQPEQKALVTEPSKKAKKEECEAKSAGRSTRASRSSKAPKDDDDDDTADEMMSDLPETETLNSMPSIGVIDEGF
KPSPAMEEIIVNFLVRMTFITCEGKEQDSKELNTRTVELLSTALEMWPSARIKFTFVDKLLTLANQSNRDPTSTL
LMSLSVLRRAMKISDYKFFSENVEQTLSLIEPCLSSTSERAHSLLAEVVGMAFDRFKSKDNTEPESCEIQLRHQL
DRVYTRAIADATVSKSLPNAEHASTTLACTLKVMATEGALRTAMIDENLPKLMKVLARLTHEFNQASAAGDIQPI
HPKRGQTPPEVVQPEYGSVANCMVMCIDIISKRVINAGSEQKQIFLRLLLQLINDKSTHGNVLMAILDAMIAWAD
DSTLGEAVSDDERNSRVGSLNAKETVLFLSKLAQLTRMGLAITQTQEWEEKLLNVTYKLCSAEGKHEPALRSEVF
LKVERLHLLGLRTRRPELRKKFFSLYHEVIGKSLFQRLQYILCIQDWDAMADTFWLMQGLDLILSTLAEDERIML
APNSALISPLLPIDLETKNPLPVPSKPKNAKSNSPELDELIKRHAKFLHEKSNISVNDLMTPLRQVATRNAHIAY
YLWVLIFPIVWATLQREEQLQLAKPMIGLLSKESHLRQAAVRPNVIQALLEGISLSQPQLKIPSELTKFLGKTFN
AWHTAIALLENHVVRYPQEARCFDALSELYRLLNEQDVLAGLWMQRCHSDVTRAGLSLSQHGHWQNAQEVFFEGI
QLATAGQAPGVSKTEMCLWETQWLNSAMQLNQWDLISDFSRTVEHSELMVQSMWRLSDWAGVKELLPSGALNETE
ETPEITTVRAFASLVSGRVREAEQHWANAVKSSLDRWWRLPETGSTCHIPSLHVFNAIAEVQESTRILLELSNTQ
RRGAQGLANNRTLVQDIMETWRLRTPNEWDQMPWWNEILMWRGNMHNIMTHAAKQIGEQNPAMLQVTQQLDQLGQ
RERAWSLNKFANAARKQNLPEVALNILNRHQGQIEVSEAFSKLREQCESYLSLGDEAVTGLNLLESQSLEFFAPP
QKAELFRLRAKFQEQMEDYSGAYTSYATAVTLCKQLAEGWISWGHFLRKHRNEGTGLMQATTCLLQGVRNNVQEN
RHELLHVVRMLAFDANTSAVGGAIMRHLEYLPKWVWIPWIPQLLLSLGHNETQYARSILLQIVAAYPQALYYQLR
TSLLERRDAAARATQTARKLAAKDDEKGKSEAKASYADIQAAAQRAQEATIAFEAAKEVMEQLRVRNTNLVGELE
VLLSELGTQFACTPEERLLVVVCTLLHRCYKYPAATTGEVPENFKKELIGVYQACFSADTSVKHADFVKEYKASY
ERDLNPEQKTFPKTVAELMSKLKGWKQRLMNDVEDSLPASLRLEDESMALRHVTFNEIEVPGQYANISYGVTDRF
MKLNRIGADVHIVRRNGNCFRRLEFLGTDGSIKQFIVQTSLTPAARGEERMLQFLTNLNDVFAKHAETRRRNMCY
YTPAIIPVWPQVRLLEDDDNHGTYQEVYDANFARYGREADLPITLFKAALDPAILGEVTGAEDVLELRLKALMEI
TQKHVTENIFSQYMYKTLPNSSHLWTFKRQLSQQLAMSSFLSALLRIGGRTPNKIMFAKNTGKIFMLDFHPAFDQ
KGIVEYIEPVPFRLTRNLHTFFTPFGVKGDFVASMASAAQACTAPEADLEAHLELFFRDQLMVWPWRRMGGDTPP
VSPSPSEIKNMARANVQEVLRRLPIIAPTPVLPDTSDTVPSVQKAVLHLVDAALNIRNVSRSAAIWAPWY

>*Ostreococcus tauri*|Phosphatase_2C|Ot03g04580+A4RUZ8

MRASVRACAGSGALDAVSDGENAAERNFGDGETGTATGDLRGRTYVVTGTETSAIAAACARRLRDAGARVVCACV
DANEARARVDGDKGDGRDEDATTANTAHERELRASGALVTMYCDVERLETIERFAREFCAKAWALDGVLNAASTT
MEEFSLTADGIERQFAVNHLAHFKLTALLMDELVRTAAASGREGRVVYLTSNLHHFSFRIRQGTPKPSRGIDFAN
INSDFGYSPLNAYGQSKLANVLHAWSLSERLAKSGARVRCVAATPGLTELELDRSLSFPGGSLISAPLKYVMINT
LEEAVVTPLYCLTAPTIPPGTYFNNCVPVKASLPGRDPRLAARLWEFSEELCDAGASSVRATARSLPAYLYYRLT
RGGRTHDPGYIEQLSGTRAERLTNFIARTQVEKAAPWWIWIVIACATIGISFAGVLLQNELYETPPITRACWRLT
LTTFFLAPMGAWEYRRWESSAERDKMRAGKTWGILLGSGFALGVHFAAWVASLDMTSLAHSLLFVTTSPLLILVE
NAIFRRHRPTNMETAGVFIGLVGAGITLLDIRDDKEVTAKGDALAFLGAVAIVFHIECGRTLRTWMPTTVYAFPV
TLIAAVFLALFALVFDEREPVFGWASSAKISWFVLLAFVSGIIGHAGFNFALGYVSSLVVSISTTMEPVIGTIIG
FLTYGTSTPKLFTLLGGPLLLAGIRADAGGAASVVRALGDACDGEASGTTVVLALVRSDGFEVAHVGDSAAYACE
TSGGGVRARRLTEDHGLGNARERARVRAEGGTIVESRGAMRVGGEYLVTRALGGTARRARGVSQTPDVVARRWRT

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NELGLILTSDGTTERLKPDDACAFVFAGKRKCDESAKVDTSIALDGDAASSTQSSEDAWDTVEVQGNSEVMNERV
ERALKCALELGSSDNVALAAVSAGRHNTQITVTQQKPSSLVAEMLSIGSNIEEYKITQLVAWSSGPYLPAKTPFR
YDDMYDEEPQPTYNFGRKFEQSAIEGALTALALAPGKGEKNRVQNAITSYVGIIDSRLARGQDEGVRAGERPFAR
GHFGEVWRAKLSRQLTAQKLECASSAVSGDSSTVIMKRILVEQDLDLQLSADREVYFGRLLCGASPHIARYMHTF
DKIPPSGRERWLVFRDEGESLERLMYAPESEVGGDSATLQLVSQSDWWRETRRSATGRRVLKTILRQIFAAVNVS
HSNFGVVHRDIKPANVFVRFDDDIVQAKLGDFGSAMDTRRRIQLYGSTGPSAAQETAEYSPPEVLFGNDLIERTL
KYDIWSLGVMMTELLSLGSPKAFSHISRKTRLALERELREVHPTARAVAYRLRAMLELCIVPPDTQVGTLLSWEC
TEVALMNIFKARDPLGVGLESIWALRLIRKLLSWDPNERPSAAQALEHAFFRDGDERGWKCGADASEHEWKSRCD
ALCASPCT

>*Ostreococcus tauri*|Phosphatase_2C|Ot09g03800+A4S313

MGAYLSQPVTRKDSTDGADARFAYGTTAMQGWRTNARDAHATIPELDGRTAFFAVFDGHGGKEVALYAARHLHES
LKETEGFEGDGDALKGALEESFLALDRRMLSKEAASELRALRSGSGEEEDGALGGLVRTGANAEEQRNRRAEINA
KLRAALIEQMKEQDPNIDERDIKFDFELEDSDFDEPQPSSSEDGGVDALDRWSGPQAGATSVVVCIRGNNAYCAN
AGDSRAVFSRKGGVAEDMSNDHKPMNEEERKRIMNAGGFVSEGRVNGSLALSRALGDFEYKRNKDLSEKEQAVTA
FPEIREFELREGDEFMILACDGIWDVMSSQECVTFVRERLIAGAKSETFKISRVCEELCDACLAPDTRGSGLGCD
NMSVVIVLLQKFWQPTSA

>*Ostreococcus tauri*|Phosphatase_2C|Ot01g02430+Q01GJ0

MRVNAWRSRGRGGGGVGTTRGGARRARGGTAARAAATRLEVSSAGAILVPHPDKADKGGEDACFVLKQSGAFGVF
DGVGGWAEEWVDPAEYSEKFAEKSAQSVLRGTRDPVAVMKDAHDETQVIGSCTACIAMLKDGNILDVANLGDAGA
LVAREGEVVYQTSPQQHEFNLPYQLGWAKVYPEGDRPEASERSEISLSPGDVLVLGSDGLWDNVPHAEVAALCAE
HNGDAEECAEAIATLAFGYSCDPEYDSPFTQQARAVAETRPEWGDRRSIIGGKMDDIAVVVAFIDSERTLS

>*Ostreococcus tauri*|PP|Ot10g01220+A4S3K6

MLGATFARDGRARGFDDATNARFTTNQRHDGDRAKTTRDDASPGARCGHTLTALRWNQRTKIVCFGGATELEGAS
ASALGDGRGGSPLHGGGRDGTNWVKLSGATSDLRVFDPQGGEWDELKSGGDVPSARAAHGAPTVGGMLVVHGGIG
PDGLARRRLVRVGSGDEGSERYAHVLSFVAQRFLVVIGGTDGSKCLGDTWVLDTTTKPYAWSKCNPTGPTPSPRT
YASASTRTDGLLLLCGGRGADGMALNDAFGLARHRDGRWEWAEAPGKAPTRRFQHATAFVDTRLHITGGASAGGQ
LVPEETTMSMLDTSAGGSTGWRECKRDGPKTGLVQDANALVGPRCRHASVSYGPFIFVHGGLRNGTLEEGELTPC
AALRHRLSSSLGGAWGTGSGAPPSFRVARVNEDSKHAHNELVSCVSSRGDDYITGGWDGTLRTWRWDPTKGLSGG
APMTGQHNDNVEFLSVDVREDHEHLAISGGRDCTVRIWDVAKRSQRGRIYAFENIASGCVDWPSQTVAVGSRGGA
VMLWDAEKGTKKCTLRGHEGEITSMCTYDWNTRDTFAINTQRDATYSNGSFSSPSSPPEVTLRPLGGSPSSPDSP
EGMNANAEQELRHASAQEAAAALDLVARRKFSLGGSDSGSPGGSSVHTPSPGFAGLGSPGDARRTPASEVRLHHR
AVVVAAAPYDSESKSTPRGVASMVRQLSIDQFENEARRIGTPGADMYTPGDTPAKLARARRAAELGAQPVHRVVI
THLLHPHTWEPSQDRRFFLNAAAINELCDAAEHCFKNEETVLRVNGPAKIFGDLHGQFGDLMRLFAEYGSPSTAG
DIAYIDYVFLGDYVDRGAYSLETISLLLALKIEYPNSVHLLRGNHEESDINGLFGFRIECVERLGEAVGDQVWRR
FNSLFEWLPLAAVIEDRICCMHGGIGRSVTHLSQINDLKRPLTMENGGVELMDILWSDPTENDGIEGLRPNARGP
GLVTFGPDRVRAFCETNGIQMIVRAHECVMDGFERFAQGQLLTVFSATNYCGTANNAGAILVLGRDLTLYPKLIH
PLPPIAMESLSPSDRIDDNLWLQDVNRERPPTPPRGRFGQSQPTIGLINPI

>*Ostreococcus tauri*|LST8|Ot06g02150+XP_001418442.1

MPTPSVVLATAGYDHTVRFWEATRGVCYRTLQYADSQVNRLEITPDKRYLAAAGNPHVRLYEVNASNPQPVTSYD
GHTGNVTAVGFEPRGSWMYTGSEDGTVKIWDLRAGGYQREYESRGAVTSVVLHPNGTELMSADQNGNIRVWDLTA
NACSCELVPEVGTAVQSLTVAGDGSMVVAGNSKGTCYVWKLQPGSKTTAHFEPLHKLNSHNGYVLKCLISPDCRL
LATTSSDKTVKLWNLDGFKLERVLEGHQRWVWDCVFSVDAAYLVTASSDTTARLWDCSTGEAIRVYSGHHKAVVC
CALNDSAVSDAVEAETDINSP

>*Ostreococcus tauri*|RAPTOR|Ot06g01080+A4RYH6

MKISPCARMQCWIQPMTTQPQNELDAIGKALQAQYERWQPRAKYKLQLDPTTEDMKKLCISCRRNAKNERVLLHY
NGHGVPRPTANGEIWVFNKSYTQYIPLSVYDLHSWTGTPAIYVFDCSNAGLIVKSFLKLSDPAQPQPKAGVDLEQ
RQSGGSMAFAQLEHGMRSGVQDSGFGPSATANSANECILIAACGANELLPQSSELPADIFSACLTTPVKMALHWF
CSNSVLHEHGITVDIIDKIPGMQNNRKTPLGELNWIFTAITDTIAWNVLPRKLFQRLFRQDLLVASLFRNFLLAE
RVMRANNCTPISSPRLPPTHQHPMWAAWDMAVEQCLLQMPSLISGDPDVEFVPSPFFTDQLTAFEVWLEYGSEHD
SPPEQLPIVLQVLLSQSHRLRALILLGRFLDLGLWAVELALSVGIFPYVLKLLQTTAPELRQILVFIWTKILALD
RSCQADLVKDDSYNYFVRFLQSSSVPVEERAMAAFILAVICDGHEKGQSVCLASGLLNICLSNIHDAAQPETGSP
FFLRWLCLCLGKLWEENFEAQKVACSAKAHEQLIPLFSHSSPDTRAAAVYACGTFISFGCVRESHQDDDIDRQES
HEPLMHAMSSQNVLGTKTSGSGSADTPNTVGLFISPGAIASMEITIAYQLLRTAEDASPMVRIETAVALARIATA
HSMMIRESLVAWKRDYDSVTAKRVVDAKRSEAMGVRRRFSSGTSFSGMDHSLGSNMSTVDEDDNMPMSVESVARS
ADEQYATSDNTMPTTAGTLPPPFPRSHDSADPVESRTPEGTKGTVYTLILQALLNLATDPVPAVAKAGCHALHAA
DIDQSHPIMQMVTKAGNFAEVEPVVRRLSASQRRRPSFASLDFGTHHERSFSKDVGVSPNGGGLTRTDSWHQRLA
NLGSSLGSRLLGSPTKSKPVSKLSGNRSEQQLSPSTGSVGLRTSTIRGKGRKSQALDSPVSSAGHLPALVIPSTR
TEQLRNSPTSLSTLRRTTSNLITDHSVEQDSLGQQRIFGSHASLDSLDSTLSPRLNRSEAMHGYASDDVHDAQLP
KSIIYKRSCGHFSTPLLETAQDEDDDDDDEIESSISPWMRPPDMKRRAERLKMIRERSKETLGGGERRLKMTEYV
SSIDVGGGVTPTSILMHPFEPHAFTGDSTGRVHIWNHNSSRMVNKIETGMKSVNLLSLVNETDDALLLTGCEDGT
VKIWRSYDSIQKETLVTAWNTLPAQPIVSENGEIRSGLPLSFYKPSTHYKAHESTQAAIVWQQLTGCLYATGNAP

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NPFLRVWDVSSEICRDTLNLQAQGTCLTAEGALLMAGTHDGAVLSYDLRAPARLLSAMQTHTTPVISILLQPGGV
NNLLVTGCSEGQLKFCDLRNASKPFLITEVTHCARWSLACSSHRIWFIARVIASGSSERAIKLWDLRGHNFAAIQ
YTNSFLGQRIGSVTALAFHPNSAYLAAGSNAGHATIYGPHF