

**Supplementary Figure S1.** Putative DSP phosphorylation sites in *Thalassiosira pseudonana* (TpDSP1), *Phaeodactylum tricornutum* (PtDSP) and *Ulnaria acus* (UaDSP). *In silico* prediction was performed using NetPhos 2.0. Phosphorylation sites are highlighted in gray.

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	5 15 25 35 45 55 65 75 85
TpDSP1	MIAQKKALLATLTIVALNNANAFVVPSTTTARPFISRPLYESSMVDQQUESTTSYQQQHDDDDN---DTNKLIMDIPPTPKAT-----
PtDSP	MAKLTSIALCAMLTSSSAFTPTFSSPKQYTCLRMSDLPRQAIPDSIYMQIAMEIPSKNGHTATGFPNLQEQVIPQQVHPVESDRVSLSAQ
UaDSP	-MNTYYLLLLATLLGTEVK---AFIVQPIISGCRLQMS--VASSSNHHFMEEAVSIIDESKAQVT---EKNE--MPQAAKPKVS-----
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	95 105 115 125 135 145 155 165 175
TpDSP1	-----PTPKNPAHKEGIFSPLVYAASTVIGPEQLNKVRAQIIISLHSDIISFVSTSDSTLGKAILRQLFEMTDADNSGYLDKREV
PtDSP	ALRQKSKPTLPKKMTAKHGDGLFSPLVKLFKAALGDDRLNKIRAKAIATHSEVIASFVETAESASGEAVLDTLFDLSDKNGDGHIDEDEL
UaDSP	-----KQAKS-HGKDGLLSPIVTSLKAVIGDDELNKLKRGKVIAMHSDIISFVDTADTRLGQAVLKMMFDVADVDSGTVERDEL
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	185 195 205 215 225 235
TpDSP1	EAALNLLGFKWLKEKHVEKIFERADLNSDGEISLEEFMAEAPKTLKVNLVKLAKNNGGDMGLLV
PtDSP	KEALRTLGF AWIEEKQAKGILSRADKDKKGYITKDEWKAEAPKTLRTNLTKLAKKNGGDLGFLV
UaDSP	ERSLKALGFRFLNEKQIKGIFDRADLDKDGHI DLEEWLTEAPKTLRTNLVKLAKQNGGDMGLLA