

name	organism	helix I	helix II	helix III
Lhcbm1	Chlamydomonas	PETFKRYR <b>E</b> LELI <b>H</b> ARWAMLGALGCIPELLG	ILAILGT <b>Q</b> VLLMGA <b>I</b> EGY <b>R</b> VN	PDTFAELKVK <b>E</b> IK <b>N</b> GR <b>L</b> AMFMSMFGFF
Lhcb1.1	Arabidopsis	PETFARNR <b>E</b> LEVI <b>H</b> SRWAMLGALGCVPELLA	ILAIWAT <b>Q</b> VILMGAV <b>E</b> GY <b>R</b> VA	PEAFaelkV <b>K</b> EL <b>K</b> N <b>R</b> LAMFMSMFGFF
FCP a	Phaeodactylum	QEKFDRLRYVEIKHGRICMLAVAGYLTQEAGI	IIFAFIGFLEIAVMKDITGGEF	EDKKLQKRAIELNQGAAQMGLALM
LHC	Ectocarpus	QERFDRLRYVEIKHGRIAMLAAILGHITAQNFR	IPLFIGFLETkVMLQKEGSFP	EEEQATKRAIELNNGRAAQMGLGLM
RedCAP	Phaeodactylum	KWGWGPSVQAEKWNGRHAMFGWFFICATAYCK	IILV <b>NA</b> HFFALSIAATICPL	SLFVGLTEEAIEINGRLAMLGLVMLI
RedCAP	Fragilariopsis	XXGWGPSVHAEKWNGRHAMFGWFFICCTAYAK	VILL <b>NA</b> HFFAISLMATICPL	SLLGLTEEAEMINGRLAMLGLISLI
RedCAP	Thalassiosira	AWGWGPSVQAEIWNNGRHAMFGWVMCAYAK	IIL <b>IAN</b> VH <b>AL</b> MVGLAATISPN	TLLGLVTPAEELANGRMAMMGIITCI
RedCAP	Aureococcus	SYGWGSAKAERWNGRHAMFGWVFIVATGYCQ	CIL <b>IAN</b> V <b>H</b> FLMVSLCAAWCPL	TLLGLTPAAEMWNGRLAMLGLVVVS
RedCAP	Ectocarpus	KYWGPTAKAERWNGRHAMFGWAAIATGYCQ	IIM <b>GH</b> V <b>H</b> ALAVSVCATVAPL	KLFLGLTPEAEIFNGRMAMMGLVVTA
RedCAP	Emiliana	KYGFPTVKAERWNGRHAMFGWAAIATGVAK	IIM <b>IA</b> H <b>V</b> HALAVSAAAAGFPQ	SLTLGLSPAEMANGRLAMLGLIAVV
RedCAP	Isochrysis	KYGFGPSVKAERWNGRHAMFGWMAIATGVAK	IIM <b>IA</b> H <b>V</b> HALAFSFAAAGFPQ	SLTLGLTPAAEMANGRVAMVGLISVV
RedCAP	Diacronema	KRGFGPTTKAERWNGRHAMFGWVILATGYAQ	IIL <b>IA</b> H <b>V</b> HALFVSLASSLSPF	SLTLGLTAAEMMNGRLAMLGLIAAV
RedCAP	Galdieria	SRGLGVTSKAERWNGRHAMFGLLAIIVLTGYAK	IVLV <b>AH</b> I <b>H</b> VLLVSIAAAIAFP	RLLGLTKEAELWNGRLAMLGLVTFIV
RedCAP	Guillardia	SRGLGVTNAERWNGRHAMFGIFMVLSSYLH	IILV <b>AH</b> V <b>H</b> VLFVSIILAAFAP	TLVKGLTAEELINGRLAMLGLISIT
RedCAP	Gracilaria	ARGWGATVKAERWNGRHAMFGFVMLVATAYCK	VILV <b>AH</b> I <b>H</b> VLMVSVAAALAPF	TLLGLTKSAELYNCRLAMLGLMVVV
RedCAP	Griffithsia	ERGWGATVKAERWNGRHVMFGWLVFWITAYCK	IVLV <b>AH</b> I <b>H</b> VLFVSIAAAIAFP	KLLGLTKDAEINWNGRVAMVGLICLV
RedCAP	Pyropia	KRGWGATVKAERWNGRHVMAGWVILVATGFVK	IIL <b>IA</b> H <b>V</b> LLFVSVAAALAPF	KLLGLTKDAEMWNGRVAMVGLMLVLV

Figure S2