

Supplementary material, to be published online

Table S1. *Zostera marina* TUGs differentially regulated among library 'D' (winter situation) and library 'C' (average summer condition). The statistical test for each gene was performed by binomial approximation as suggested in Susko & Roger (2004). *P*-values refer to comparison of individual gene frequency. The gene description starts with a SWISSPROT entry number if not indicated otherwise (GB = Genbank).

TUG id	P-value	library D	library C	Data base entry, gene description - species of best hit
Upregulation winter -> summer				
Contig62	5.55e-07	0	14	GB AT1G29930.1, light-harvesting complex - <i>Arabidopsis thaliana</i>
Contig68	1.84e-03	12	20	Q41914, cysteine-rich protein - <i>Arabidopsis thaliana</i>
Contig61	2.25e-03	1	8	NoHit
Contig849	3.10e-03	0	6	NoHit
Merge29	3.24e-03	2	9	P27521, chlorophyll a/b binding protein 4 - <i>Arabidopsis thaliana</i>
Contig107	9.11e-03	0	5	O04006, photosystem I reaction center subunit VI - <i>Brassica rapa</i>
Contig188	9.11e-03	0	5	Q9SA56, photosystem I reaction center subunit II-2 - <i>Arabidopsis thaliana</i>
Contig71	9.11e-03	0	5	GR Q8LHX8, unknown protein - <i>Oryza sativa</i>
Contig114	9.11e-03	0	5	Q9XF88, chlorophyll a/b binding protein CP29 - <i>Arabidopsis thaliana</i>

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Contig101	9.11e-03	0	5	GR Q9LD82, putative heme binding protein 2 - <i>Oryza sativa</i>
Merge71	9.11e-03	0	5	P12360, chlorophyll a/b binding protein 6a - <i>Solanum lycopersicum</i>
Contig109	2.68e-02	0	4	Q9SFF9, germin like protein - <i>Arabidopsis thaliana</i>
Contig200	2.68e-02	0	4	P50156, probable aquaporin TIP1.1 - <i>Oryza sativa</i>
Contig228	2.68e-02	0	4	P13192, photosystem I reaction center subunit III - <i>Hordeum vulgare</i>
Contig94	2.68e-02	0	4	P42767, Aquaporin PIP-type - <i>Atriplex canescens</i>
Contig172	2.68e-02	0	4	Q9SUI5, Photosystem I reaction center subunit psaK - <i>Arabidopsis thaliana</i>
Contig25	2.68e-02	0	4	P69326 - ubiquitin - <i>Triticum aestivum</i>
Contig133	3.71e-02	6	10	P14009, 14kDa proline-rich protein - <i>Daucus carota</i>
Contig826	3.92e-02	1	5	NoHit
merge188	3.92e-02	1	11	P27495, chlorophyll a/b binding protein 40 - <i>Nicotiana tobaccum</i>

Downregulation winter -> summer

Contig479	1.03e-16	290	47	Q41914, low-molecular weight cystein rich protein - <i>Arabidopsis thaliana</i>
Contig926	7.42e-04	19	0	Q7YJV4, chloroplast 30S ribosomal protein - <i>Calycanthus fertilis</i>
Contig28	8.99e-03	13	0	Q9MTP2, hypothetical protein in trnF-trnL intron - <i>Oenothera hookeri</i>
Contig483	1.36e-02	12	0	Q2VEI9, ATP synthase C chain - <i>Solanum tuberosum</i>

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Contig326	3.13e-02	10	0	Q39194, photosystem II reaction center W - <i>Arabidopsis thaliana</i>
Contig301	4.74e-02	9	0	NoHit
Contig296	4.74e-02	9	0	NoHit