

**Table S6. *Anabaena* sp. PCC 7120 proteins with secretion signal and SH3- binding motif.** All proteins encoded by the genome of *Anabaena* sp. PCC 7120 (in total 6135) were analyzed by SecretomeP (Bendtsen JD, Kiemer L, Fausbøll A, Brunak S. 2004. Non-classical protein secretion in bacteria. BMC Microbiol. 5:58). All proteins with a score above 0.5 indicative for possible secretion signal were analyzed for the presence of a PXXPX[RK] (column 2) or [RKHYFW]XXPXXP motifs (column 3; the number of detected motifs is indicated). Column 1 gives the gene ID and column for the putative functional classification.

Gene name	Number of PXXPX[RK] motifs	Number of [RKHYFW]XXPXXP motifs	Functional assignment
all0001	0	1	unknown protein
all0047	0	1	hypothetical protein
all0187	0	1	transcriptional regulator
all0293	1	0	unknown protein
all0385	1	1	hypothetical protein
all0388	1	0	periplasmic iron-compound-binding protein of an iron(III) ABC transporter,
all0404	0	1	hypothetical protein
all0405	1	1	hypothetical protein
all0407	0	1	unknown protein
all0423	0	1	unknown protein
all0591	0	1	hypothetical protein
all0778	1	0	similar to serine protease inhibitor
all0781	0	1	hypothetical protein
all0839	1	2	hypothetical protein
all0848	0	2	putative alpha-mannosidase
all0911	1	0	periplasmic phosphate-binding protein of an ABC phosphate transport system
all0937	0	1	unknown protein
all0966	2	1	hypothetical protein
all0984	0	1	hypothetical protein
all1021	1	2	probable proteinase
all1119	0	1	hypothetical protein
all1154	0	3	unknown protein
all1179	0	1	hypothetical protein
all1186	0	1	hypothetical protein
all1210	0	1	hypothetical protein
all1226	1	0	unknown protein
all1273	0	1	unknown protein
all1288	1	0	hypothetical protein
all1342	0	1	unknown protein
all1351	1	0	unknown protein
all1471	2	0	unknown protein
all1484	0	1	unknown protein
all1541	0	1	peroxiredoxin 2 family protein/glutaredoxin
all1646	1	1	heterocyst glycolipid synthase
all1651	0	1	transcriptional regulator
all1725	0	1	unknown protein
all1772	2	3	unknown protein
all1820	0	1	hypothetical protein
all1835	1	0	unknown protein
all1862	1	1	similar to peptidase
all1919	1	1	serine/threonine kinase
all1939	0	1	processing proteinase
all1991	1	1	hypothetical protein
all2005	0	1	unknown protein
all2006	1	0	unknown protein
all2008	0	1	serine proteinase
all2107	0	1	hypothetical protein
all2145	1	0	transposase
all2158	0	1	ferrichrome-iron receptor
all2228	0	1	ABC transporter, phosphate-binding protein
all2229	0	1	ABC transporter, phosphate-binding protein
all2236	0	1	ferrichrome-iron receptor

all2344	0	1	unknown protein
all2424	0	1	unknown protein
all2430	1	1	hypothetical protein
all2610	1	1	ferrichrome-iron receptor
all2674	1	1	ferrichrome-iron receptor
all2736	1	0	hypothetical protein
all2801	0	1	unknown protein
all2843	0	1	alkaline phosphatase
all2869	0	1	unknown protein
all2871	0	1	unknown protein
all2910	1	1	carbonate dehydratase
all3087	0	1	hypothetical protein
all3113	0	2	serine esterase
all3144	1	0	hypothetical protein
all3169	0	1	WD repeat protein with Ser/Thr protein kinase motif
all3179	0	1	hypothetical protein
all3292	0	1	unknown protein
all3314	1	0	unknown protein
all3321	0	1	unknown protein
all3516	0	1	unknown protein
all3521	1	0	probable hydrogenase component
all3559	0	1	unknown protein
all3616	0	1	unknown protein
all3634	1	0	similar to esterase
all3635	0	1	hypothetical protein
all3826	0	1	unknown protein
all3852	0	1	unknown protein
all3916	1	1	unknown protein
all3924	0	1	probable penicillin amidase
all3933	1	2	hypothetical protein
all3941	1	0	unknown protein
all4121	0	1	ferredoxin--NADP(+) reductase
all4283	0	1	hypothetical protein
all4292	1	1	hypothetical protein
all4343	0	1	hypothetical protein
all4345	0	1	polysaccharide deacetylase
all4382	0	1	unknown protein
all4401	0	2	unknown protein
all4476	1	0	unknown protein
all4668	1	2	serine/threonine kinase
all4689	1	0	hypothetical protein
all4729	1	0	hypothetical protein
all4760	1	0	unknown protein
all4768	0	1	hypothetical protein
all4770	0	1	hypothetical protein
all4999	0	1	N-acetylmuramoyl-L-alanine amidase
all5011	0	1	unknown protein
all5043	0	1	polyamine ABC transporter, polyamine-binding protein
all5097	0	1	hypothetical protein
all5100	1	0	unknown protein
all5114	0	1	unknown protein
all5136	0	2	molybdopterin biosynthesis protein MoeA
all5137	1	1	hypothetical protein
all5278	0	1	serine/threonine kinase
all5310	0	1	unknown protein
all5316	0	1	unknown protein
all7008	1	1	transposase
all7024	0	2	hypothetical protein
all7121	0	2	unknown protein
all7148	1	1	transposase
all7188	0	1	unknown protein
all7309	1	1	hypothetical protein
all7313	1	0	hypothetical protein

all7344	1	0	unknown protein
all7348	0	2	lethal leaf-spot 1 homolog
all7374	0	1	unknown protein
all7597	0	1	hypothetical protein
all7598	0	1	unknown protein
all7624	0	1	hypothetical protein
all7674	1	1	unknown protein
all7681	0	1	unknown protein
all8035	0	1	unknown protein
all8040	0	2	unknown protein
all8089	0	1	phosphonate ABC transporter, phosphate-binding protein
all8564	0	1	hypothetical protein
alr0103	0	1	hypothetical protein
alr0114	1	2	hypothetical protein
alr0132	0	1	hypothetical protein
alr0208	0	1	unknown protein
alr0246	1	0	hypothetical protein
alr0255	0	1	unknown protein
alr0276	1	1	hypothetical protein
alr0289	0	1	hypothetical protein
alr0297	1	0	hypothetical protein
alr0299	0	1	ABC transporter, periplasmic polyamine-binding protein
alr0383	5	0	unknown protein
alr0487	1	1	hypothetical protein
alr0564	1	0	hypothetical protein
alr0593	0	1	unknown protein
alr0608	0	1	nitrate transport nitrate-binding protein NrtA
alr0647	0	1	hypothetical protein
alr0668	1	1	hypothetical protein
alr0672	0	1	similar to vanadium chloroperoxidase
alr0702	0	1	serine proteinase
alr0718	1	2	penicillin-binding protein
alr0791	0	1	outer membrane secretion protein
alr0816	0	1	hypothetical protein
alr0996	1	0	protease
alr0998	0	1	putative catalase
alr1031	0	1	general secretion pathway protein D
alr1112	0	1	probable transglycosylase
alr1159	1	0	tRNA/rRNA methyltransferase
alr1242	0	1	unknown protein
alr1360	0	1	unknown protein
alr1379	0	2	unknown protein
alr1386	0	1	unknown protein
alr1501	1	0	hypothetical protein
alr1576	0	1	dehydrogenase subunit
alr1584	1	0	unknown protein
alr1603	1	0	putative heterocyst to vegetative cell connection protein (fraH)
alr1615	1	0	Subtilase family protein
alr1653	1	2	unknown protein
alr1690	1	1	cell wall-binding protein
alr1700	1	4	hypothetical protein
alr1810	0	1	unknown protein
alr1959	1	2	hypothetical protein
alr2074	0	1	hypothetical protein
alr2168	0	1	transposase
alr2175	0	1	ferrichrome iron receptor
alr2185	1	0	ferrichrome-iron receptor
alr2211	0	1	ferrichrome-iron receptor
alr2234	1	0	phosphodiesterase/alkaline phosphatase D
alr2269	1	1	chloroplastic outer envelope membrane protein homolog
alr2338	1	0	hypothetical protein

alr2386	0	1	hypothetical protein
alr2464	0	1	unknown protein
alr2596	1	0	ferrichrome-iron receptor
alr2745	0	2	hypothetical protein
alr2758	0	1	serine proteinase
alr2780	1	1	DNA topoisomerase I
alr2790	0	2	unknown protein
alr2877	0	1	bicarbonate transport bicarbonate-binding protein CmpA
alr2920	0	1	putative short chain oxidoreductase
alr2933	1	0	membrane-bound lytic transglycosylase A
alr2975	1	0	signal peptidase I
alr2984	1	0	hypothetical protein
alr2991	1	1	DnaJ protein
alr3115	0	1	hypothetical protein
alr3242	1	0	heme transport protein
alr3304	0	1	hypothetical protein
alr3312	0	1	unknown protein
alr3353	1	1	putative peptidase
alr3363	0	1	hypothetical protein
alr3364	1	2	unknown protein
alr3452	0	1	hypothetical protein
alr3486	0	1	unknown protein
alr3562	0	2	unknown protein
alr3592	0	1	unknown protein
alr3676	0	2	unknown protein
alr3752	0	1	unknown protein
alr3754	1	1	unknown protein
alr3817	0	1	unknown protein
alr3832	5	2	translation initiation factor IF-2
alr3844	0	1	hypothetical protein (ycf48)
alr3907	0	1	hypothetical protein
alr4036	0	1	hypothetical protein
alr4147	0	1	amidase enhancer
alr4241	0	1	hypothetical protein
alr4277	0	1	sugar ABC transporter sugar binding protein
alr4405	0	1	hypothetical protein
alr4550	0	1	hypothetical protein
alr4579	1	0	penicillin-binding protein
alr4712	0	1	unknown protein
alr4769	0	1	unknown protein
alr4794	0	4	hypothetical protein
alr4812	1	1	heterocyst differentiation related protein PatN
alr4863	1	0	unknown protein
alr4870	0	1	subtilase family peptidase
alr4893	0	2	hypothetical protein
alr4932	0	2	DNA polymerase III gamma and tau subunits
alr4984	1	1	unknown protein
alr5101	0	1	penicillin-binding protein 2
alr5161	0	1	unknown protein
alr5168	0	1	hypothetical protein
alr5270	1	2	hypothetical protein
alr5291	1	0	similar to alkaline phosphatase
alr5330	0	1	unknown protein
alr5351	1	2	heterocyst glycolipid synthase
alr7003	1	0	transposase
alr7077	0	1	unknown protein
alr7079	0	1	unknown protein
alr7088	1	0	unknown protein
alr7092	0	1	unknown protein
alr7153	0	1	hypothetical protein
alr7210	0	1	unknown protein
alr7213	0	1	similar to transfer complex protein TrsK

alr7215	0	2	hypothetical protein
alr7308	0	1	reverse transcriptase homolog
alr7535	1	0	unknown protein
alr7536	2	0	unknown protein
alr7612	0	1	unknown protein
alr7649	2	3	unknown protein
alr8034	1	1	similar to mobilization protein Tral
alr8051	0	1	unknown protein
alr8530	1	0	unknown protein
alr8534	1	2	unknown protein
asl0125	1	2	transcriptional regulator
asl0977	0	1	unknown protein
asl2052	1	0	unknown protein
asl2332	0	1	unknown protein
asl2639	1	1	unknown protein
asl3998	0	1	hypothetical protein
asl4356	0	1	unknown protein
asl4565	1	0	unknown protein
asl4624	0	1	unknown protein
asl4753	1	0	unknown protein
asl7237	0	1	unknown protein
asl7296	0	1	unknown protein
asl8561	0	1	unknown protein
asr1907	1	0	unknown protein
asr1945	1	0	unknown protein
asr2448	0	1	hypothetical protein
asr2565	1	0	unknown protein
asr5071	0	1	hypothetical protein
asr5144	1	1	unknown protein
asr7343	1	0	unknown protein
asr8513	1	1	unknown protein
asr8523	1	0	unknown protein