

Table S4 Comparison of mRNA and protein levels of responsive genes under nitrogen starvation.

gene	Protein 24h	Protein 48h	RNA 24h	RNA 48h	RNA 72h	description
sll0002	0.7987	0.5187	1.2541	0.5387	0.5609	penicillin-binding protein 1
sll0051	0.5330	0.6925	0.8954	0.8302	1.2293	conserved hypothetical protein
sll0069	0.9001	0.4852	0.7512	0.5240	0.3971	hypothetical protein
sll0080	0.7107	0.5952	0.7629	0.8458	0.9997	N-acetyl-glutamate semialdehyde dehydrogenase ArgL
sll0103	0.6131	0.7686	0.8457	0.3853	0.3979	conserved hypothetical protein
sll0108	0.2910	0.2340	0.2507	0.2994	0.4374	ammonium transporter
sll0172	0.3690	0.3970	0.8526	0.1584	0.2515	hypothetical protein
sll0173	0.4490	0.3347	0.5248	0.2104	0.2320	streptogramin B lactonase, putative
sll0175	0.5963	0.5770	2.0978	3.0558	2.8759	putative protein-related
sll0180	0.6527	0.5348	0.5708	0.3157	0.2567	hypothetical 41.2 kd lipoprotein in hded-gada intergenic region precursor, putative
sll0185	0.4423	0.3608	2.2689	0.2604	0.2930	conserved hypothetical protein
sll0224	0.6068	0.6098	0.1797	0.1905	0.2455	amino-acid abc transporter binding protein in gltj-cute intergenic region precursor, putative
sll0272	0.6627	1.4025	1.1957	0.0789	0.1278	hypothetical protein
sll0301	0.6766	0.4264	1.0128	1.5701	1.5990	HglK
sll0335	0.3289	0.2537	10.1929	1.6426	2.0160	conserved hypothetical protein
sll0368	0.5855	0.5889	1.2892	1.1195	1.9542	pyrimidine operon regulatory protein PyrR
sll0374	0.5423	0.3215	0.8381	1.1386	1.7156	urea/short-chain amide ABC transporter, ATP-binding protein, putative
sll0395	0.7605	0.5764	1.7559	1.5088	1.5862	phosphoglycerate mutase, putative
sll0401	0.6246	0.4203	0.8722	0.5846	0.6274	citrate synthase
sll0420	0.5824	0.9488	0.6208	1.4102	0.7886	urease beta subunit
sll0446	0.7837	0.6017	0.5626	1.4848	1.1401	hypothetical protein
sll0470	0.6468	1.1574	0.1885	0.1470	0.1458	hypothetical protein
sll0495	1.2005	0.9268	3.0971	5.9691	7.8992	asparaginyl-trna synthetase (ec 6.1.1.22) (asparagine--trna ligase) (asnrs)
sll0528	0.7849	0.5241	0.5715	0.7293	0.5353	(), putative
sll0553	0.5402	0.6464	0.5225	0.4588	0.3275	putative protein

sll0569	0.8803	0.6386	2.3691	2.1921	1.4865	reca protein
sll0596	0.6845	0.4131	0.9126	0.4173	0.4810	conserved hypothetical protein
sll0606	0.7337	0.5339	7.6548	3.0739	3.9002	hypothetical protein
sll0625	0.9116	0.5938	0.8332	1.2263	1.9927	hypothetical protein
sll0741	0.4869	0.5851	0.8566	0.8624	0.8952	pyruvate-flavodoxin oxidoreductase
sll0749	1.0001	0.6658	1.5335	0.2513	0.4130	conserved hypothetical protein
sll0753	0.6460	0.8271	2.4212	1.7733	3.0440	methylenetetrahydrofolate dehydrogenase
sll0764	0.4941	0.3368	0.9025	0.8326	0.9071	urea/short-chain amide ABC transporter, ATP-binding protein, putative
sll0772	0.7728	0.6079	0.1643	0.2397	0.2976	conserved hypothetical protein
sll0779	0.5171	1.1364	2.2503	2.6133	2.9334	utilizing regulatory protein tutC
sll0781	0.6562	0.3713	0.5296	0.3356	0.3999	conserved hypothetical protein
sll0783	0.3516	0.2860	14.8254	2.8332	8.2162	hypothetical protein
sll0788	0.4272	0.2641	0.2436	0.5686	0.4538	conserved hypothetical protein
sll0813	0.7605	0.5107	0.8849	0.3861	0.4841	cytochrome c oxidase subunit II
sll0837	0.8084	0.6592	0.7081	0.3172	0.3797	TprN
sll0854	0.8681	0.5977	0.4400	0.4133	0.5315	hypothetical protein
sll0877	0.8299	0.6120	1.1330	1.5441	2.8490	hypothetical protein
sll0900	0.0003	1.0870	0.9759	0.8696	1.0857	ATP phosphoribosyltransferase
sll0911	1.0471	0.6297	0.6457	1.6585	1.0231	hypothetical protein
sll0915	0.5770	0.5945	1.1576	0.7821	0.5254	zinc protease, putative
sll0920	0.5211	0.5302	0.7115	0.2667	0.2728	phosphoenolpyruvate carboxylase
sll0923	0.6510	0.4864	1.1532	1.1069	1.5306	putative transmembrane protein Wzc, putative
sll0997	0.7042	0.5734	0.3526	0.3619	0.6626	conserved hypothetical protein
sll1027	0.7107	0.5938	1.1490	0.2960	0.3225	small subunit of NADH-dependent glutamate synthase
sll1039	0.3319	0.4000	2.6256	3.0262	3.4520	conserved hypothetical protein
sll1049	0.4496	0.3131	2.0830	0.7169	0.6822	hypothetical protein
sll1053	0.6519	0.4883	4.7421	2.3715	3.5722	membrane fusion protein mtrc precursor, putative
sll1054	0.5266	0.5238	2.1080	2.3922	1.5491	conserved hypothetical protein
sll1080	0.2949	0.2970	1.6686	2.0195	1.9212	hypothetical 36.3 kd lipoprotein precursor, putative
sll1082	0.4686	0.2751	3.2069	2.4704	5.4634	ABC transporter, ATP-binding protein
sll1085	1.0173	0.6293	2.6251	2.9436	3.8101	aerobic glycerol-3-phosphate dehydrogenase, putative
sll1089	0.6165	0.8803	0.5251	0.1458	0.1444	hypothetical protein

sll1096	0.8889	0.4564	0.6352	0.2389	0.3668	cyanelle ribosomal protein S12
sll1097	0.6545	0.5747	1.3589	0.4637	0.1912	30S ribosomal protein S7
sll1118	0.6527	0.6010	3.2567	2.9757	1.9325	conserved hypothetical protein
sll1196	0.8110	0.6605	0.7621	0.3177	0.3137	Pfk1
sll1217	1.1933	0.4511	0.5690	2.1101	2.3114	hypothetical protein
sll1218	0.7283	0.5907	2.6447	2.4308	2.8860	conserved hypothetical protein
sll1221	0.5368	0.4647	0.4324	0.3122	0.3265	hydrogenase subunit
sll1223	0.3992	0.3618	0.6067	0.5828	0.3353	hoxU
sll1226	0.7348	0.6636	0.6612	1.2965	1.1975	hoxH
sll1252	0.7246	0.5562	1.5924	2.8863	2.1936	conserved hypothetical protein
sll1258	0.9407	0.6120	0.3488	1.0625	0.9562	Deoxycytidine triphosphate deaminase family protein
sll1270	0.2891	0.2766	1.6125	0.5005	0.4277	amino acid ABC transporter, permease protein
sll1271	0.2904	0.3915	1.0594	1.2410	0.8080	conserved hypothetical protein
sll1284	0.9461	0.4993	3.6008	0.9670	1.0515	serine esterase [Spirulina platensis, C1, Genomic, 827 nt].
sll1291	0.4270	0.4958	0.7553	0.4006	0.5590	ChpA, putative
sll1292	1.0152	1.4388	0.5119	0.2252	0.4811	similar to sir1042 protein of Synechocystis sp. strain PCC 6803
sll1296	0.6158	0.4885	3.0689	1.1200	1.0284	ChpA, putative
sll1306	0.7143	0.4866	0.0804	0.0376	0.0452	conserved hypothetical protein
sll1314	0.6949	0.3967	0.7898	0.7502	0.7466	c4-dicarboxylate-binding periplasmic protein precursor, putative
sll1327	0.7278	0.4160	0.1304	0.0698	0.0518	ATP synthase gamma chain
sll1330	0.2954	0.2533	2.3081	0.6252	0.7123	response regulator SrrB, putative
sll1343	0.7806	0.6207	0.9212	1.1881	0.8700	Tricorn protease interacting factor F3, putative
sll1358	0.6250	0.4380	0.1872	0.1150	0.1175	conserved hypothetical protein
sll1367	0.7813	0.6557	0.9650	1.0580	1.0735	conserved hypothetical protein
sll1378	0.9479	1.5601	0.8417	1.2729	1.3466	()
sll1388	0.5974	0.6588	2.4585	1.7688	2.0320	conserved hypothetical protein
sll1423	0.6317	0.6072	0.1242	0.2560	0.2987	NtcA
sll1426	0.5817	0.9940	0.1970	0.1875	0.2339	hypothetical protein
sll1427	0.7800	0.5882	1.5348	0.9015	0.6291	DO serine protease
sll1440	0.7364	0.5889	2.3654	4.3068	11.3786	pyridoxamine 5-phosphate oxidase
sll1452	0.7639	0.4507	0.5504	0.2073	0.3132	nrtC-like transporter protein
sll1453	0.7651	0.2910	0.1324	0.1491	0.1702	nitrate transporter protein (nrtD) homolog
sll1483	0.4897	1.3850	9.4180	7.5426	10.5554	transforming growth factor induced protein

sll1498	0.3761	0.5845	1.2662	0.7001	0.9258	()
sll1508	0.5368	1.1013	0.7718	1.0025	0.8693	UDP-3-0-acyl N-acetylglucosamine deacetylase
sll1514	1.0395	0.5216	0.2608	0.4401	0.3832	HspA
sll1545	0.9074	0.7710	0.6428	0.9109	0.7682	gstA protein, putative
sll1571	0.6775	0.5970	0.2003	0.2199	0.1783	hypothetical protein
sll1581	0.7018	0.6365	0.8899	0.5346	0.4191	polysaccharide export protein, putative, putative
sll1641	0.7937	0.6150	0.4845	0.8225	0.6800	putative glutamate decarboxylase
sll1676	0.8237	0.5938	1.2532	0.6974	0.6497	4-alpha-glucanotransferase (ec 2.4.1.25) (amylomaltase) (disproportionating enzyme) (d-enzyme)
sll1679	0.7205	0.5882	2.7300	0.4756	0.3595	periplasmic serine protease
sll1694	0.7315	0.5741	0.0145	0.0298	0.0242	pilin
sll1740	0.5356	0.4464	0.1698	0.3225	0.2693	ribosomal protein L19
sll1744	1.0246	0.6061	0.0330	0.0142	0.0170	cyanelle ribosomal protein L1
sll1750	0.8636	0.6575	1.0650	0.4414	0.5018	urease alpha subunit
sll1757	0.5834	0.7524	0.9041	0.5363	0.3343	conserved hypothetical protein
sll1770	0.3360	0.5255	0.5764	1.0843	0.7539	ABC transporter, putative
sll1800	0.5528	0.5634	0.1768	0.0455	0.0365	50s ribosomal protein l4
sll1801	0.7241	0.4634	0.0475	0.0168	0.0181	50s ribosomal protein l23
sll1802	0.9166	0.6472	0.1910	0.0404	0.0482	50s ribosomal protein l2
sll1803	0.8826	0.6072	0.3798	0.0577	0.0577	50s ribosomal protein l22
sll1804	0.8741	0.5131	0.4815	0.0515	0.0397	30S ribosomal protein S3
sll1809	0.7639	0.3347	0.2035	0.0270	0.0255	30s ribosomal protein s8
sll1810	0.9091	0.5208	0.2929	0.0295	0.0358	50s ribosomal protein l6
sll1811	0.5580	0.4679	0.6091	0.1009	0.0897	50s ribosomal protein l18
sll1817	0.7776	0.5200	0.4176	0.0719	0.0898	30s ribosomal protein s11
sll1819	0.5507	0.3768	0.2927	0.1254	0.1671	50s ribosomal protein l17
sll1821	0.5269	0.6173	0.1462	0.0364	0.0340	chloroplast ribosomal protein L13
sll1822	0.7102	0.3445	0.0993	0.0396	0.0412	chloroplast 30s ribosomal protein s9
sll1825	0.6803	0.4292	0.2740	0.3739	0.6064	conserved hypothetical protein
sll1837	0.6540	0.6954	0.6446	0.5358	0.7050	conserved hypothetical protein
sll1862	1.2970	0.5708	0.0498	0.1994	0.1499	hypothetical protein
sll1933	0.5336	0.9980	2.4461	2.6846	2.6928	DnaJ1 protein
sll1981	0.6431	0.7536	0.5109	0.1848	0.1934	acetolactate synthase

slI2008	1.0001	0.4771	1.0451	0.5225	0.6482	processing protease, putative
slI2009	1.0235	0.6536	1.1283	0.7776	0.8630	processing protease, putative
slr0051	0.7452	0.5179	0.4812	0.8471	0.6663	putative carbonic anhydrase
slr0058	0.5672	0.8525	1.1516	0.9699	2.1791	hypothetical protein
slr0083	0.9823	0.6262	0.4678	0.1048	0.1679	conserved hypothetical protein
slr0162	0.6739	0.4998	0.3194	0.3670	0.2637	pilin biogenesis protein-related
slr0163	0.6349	0.4382	0.3890	0.5674	0.4646	pilin biogenesis protein
slr0201	0.6277	0.8203	1.8036	0.8440	1.2990	succinate dehydrogenase subunit C, putative
slr0226	0.6667	0.5952	0.1422	0.0277	0.0434	hypothetical protein
slr0250	0.9033	0.5750	1.0551	0.4714	0.6041	17.3 kd protein in mura-rpon intergenic region precursor, putative
slr0257	0.0150	0.5643	0.6792	0.1953	0.2080	carboxyl terminal protease
slr0369	0.5675	0.4658	0.6884	0.1475	0.1513	mexF
slr0370	0.7364	0.6196	0.9575	0.3559	0.2916	putative aldehyde dehydrogenase
slr0374	0.4587	0.5417	0.2712	0.0197	0.0145	conserved hypothetical protein
slr0439	0.9381	0.4914	1.1055	0.7785	0.4872	hypothetical protein
slr0469	0.4757	0.4968	0.2769	0.4827	0.2749	cyanelle ribosomal protein S4
slr0518	0.4335	0.6006	0.8931	0.8477	1.2806	alpha-l-arabinofuranosidase b precursor b)-related
slr0551	0.9569	0.5546	0.3333	0.0631	0.0738	conserved hypothetical protein
slr0575	0.7072	0.6289	0.3356	0.1887	0.2401	hypothetical protein
slr0585	0.6341	0.4329	1.6937	0.7496	0.8353	argininosuccinate synthase
slr0628	0.5141	0.5184	0.1667	0.2762	0.4971	30S ribosomal protein S14
slr0637	0.6739	0.5192	0.9681	0.2563	0.2195	hypothetical protein
slr0645	0.5938	0.5647	0.5287	0.4924	0.6907	hypothetical protein
slr0658	0.6916	0.6489	0.6601	0.9956	0.5824	hypothetical protein
slr0665	0.5385	0.5444	2.1348	0.2758	0.2904	putative aconitate hydratase
slr0708	0.7479	0.5342	0.3620	0.0805	0.0622	hypothetical protein
slr0721	0.8475	0.6566	3.0084	2.6195	2.2589	malate oxidoreductase
slr0744	1.1494	0.6423	1.1325	0.1501	0.1303	translation initiation factor if-2
slr0769	0.2102	0.7123	0.7195	0.5347	0.7880	conserved hypothetical protein
slr0773	0.5800	0.4941	0.4495	0.7738	0.4791	TRK system potassium uptake protein, putative, putative
slr0798	0.9251	0.5838	0.1888	0.2989	0.2040	cation-transporting ATPase, P-type
slr0809	0.8203	1.3405	0.4125	0.4779	0.4672	putative dTDP-glucose 4-6-dehydratase
slr0818	0.6321	0.4602	1.4798	1.5363	3.2060	hypothetical protein

slr0839	0.8439	0.5834	0.7623	0.5358	0.4829	ferrochelatase
slr0884	0.4125	0.2977	0.5937	0.5223	0.6480	glyceraldehyde 3-phosphate dehydrogenase 1 (ec 1.2.1.12) (gapdh 1) (gap-1)
slr0891	0.8143	0.6579	2.1468	1.4389	1.3159	N-acetylmuramoyl-L-alanine amidase, putative, putative
slr0904	1.0020	0.6017	6.5042	3.5683	4.0381	Mg(2+) chelatase family protein
slr0929	0.7782	0.5851	0.8179	0.4944	0.6750	chromosome partitioning protein, ParA family
slr0942	0.7364	0.5886	0.8361	0.3894	0.5995	putative alcohol dehydrogenase
slr0957	0.2191	0.2362	0.8307	0.4347	0.3524	hypothetical protein
slr1022	0.5931	0.5754	1.2543	0.2174	0.2610	acetylornithine aminotransferase
slr1031	0.8696	0.6357	1.0101	2.2217	2.3017	tyrosyl-tRNA synthetase
slr1104	0.8425	0.6636	0.7152	2.3919	2.6185	conserved hypothetical protein
slr1143	0.7570	0.5889	1.6442	1.7831	1.0445	GGDEF family protein
slr1171	0.5656	0.9479	0.3673	1.2062	1.2599	BsaA
slr1178	0.4577	0.6435	0.2946	0.3393	0.3005	hypothetical protein
slr1179	0.8052	0.6662	0.8640	0.8135	0.9526	conserved hypothetical protein
slr1203	0.0005	0.6623	0.4586	0.5041	0.4875	conserved hypothetical protein
slr1233	0.7153	0.4836	0.6943	0.5034	0.6562	fumarate reductase flavoprotein subunit
slr1238	0.8584	0.5631	0.5110	0.7139	0.6328	glutathione synthetase
slr1254	0.8130	0.6498	1.7863	1.1290	1.0104	phytoene dehydrogenase
slr1258	0.5634	0.4924	0.8534	0.9361	0.7884	conserved hypothetical protein
slr1259	0.9718	0.5695	0.5479	0.8302	0.8844	homology to a plant EST:RICS2753A
slr1260	0.7955	0.3536	0.5819	0.6621	0.5876	conserved hypothetical protein
slr1265	0.6169	0.5189	0.4263	0.2368	0.2099	DNA-directed RNA polymerase gamma chain
slr1275	0.6410	0.5020	0.2083	0.1430	0.1701	hypothetical protein
slr1276	0.5385	0.5089	0.2333	0.1568	0.1241	hypothetical protein
slr1289	0.5540	0.3799	0.9133	0.5569	0.3979	isocitrate dehydrogenase [nadp] (ec 1.1.1.42) (oxalosuccinate decarboxylase) (idh)
slr1363	0.6250	0.5181	2.8576	2.0172	1.8537	conserved hypothetical protein
slr1379	0.6398	0.5931	0.7858	0.2764	0.3044	cytochrome d ubiquinol oxidase subunit I
slr1385	0.8718	0.5330	1.0227	2.0822	3.5235	hypothetical protein
slr1406	0.6337	0.6238	0.2516	0.3065	0.3141	hypothetical protein
slr1410	0.6231	0.7032	0.2850	0.3062	0.3239	putative WD-repeat protein, putative
slr1612	0.6716	0.6289	0.2396	0.2733	0.3119	hypothetical protein

slr1616	0.9149	0.5066	0.5253	0.8434	0.7156	hypothetical protein
slr1678	0.5277	0.6882	0.0790	0.0716	0.0559	50S ribosomal protein L21
slr1681	0.3114	0.3179	3.3551	4.7564	4.4173	hypothetical protein
slr1693	0.6031	0.5482	0.1895	0.3477	0.4386	pilg protein, putative
slr1694	0.5476	0.4762	0.2691	0.2762	0.3325	appA protein
slr1735	0.3730	0.2365	1.0352	1.0382	0.8385	glutamine transport ATP-binding protein glnq
slr1743	0.6472	0.4486	6.0717	3.3722	2.8839	NADH dehydrogenase
slr1751	0.6105	0.5519	0.2267	0.1138	0.1289	carboxyl terminal protease
slr1753	0.6523	0.5126	1.1555	0.6132	0.3014	hypothetical protein
slr1768	0.6527	0.5931	0.3270	0.4238	0.6309	B-cell receptor associated protein-related protein, putative
slr1773	0.5609	0.5297	0.2878	0.3554	0.3738	hypothetical protein
slr1793	0.6254	0.6207	0.2589	0.2572	0.3051	transaldolase
slr1815	0.6180	0.4034	0.2007	0.2955	0.5082	conserved hypothetical protein
slr1829	0.4042	0.3234	1.1533	0.7381	0.6689	conserved hypothetical protein
slr1830	0.3984	0.3479	0.4542	0.4444	0.4662	poly-beta-hydroxybutyrate polymerase
slr1841	0.6357	0.3920	0.0405	0.0071	0.0082	SomA
slr1881	0.7407	0.5283	1.1138	1.8463	1.2776	()
slr1898	0.4581	0.3064	2.9255	1.3113	1.1047	acetylglutamate kinase
slr1908	1.0707	0.6357	0.0294	0.0363	0.0527	conserved hypothetical protein
slr1924	0.6575	0.8091	0.3208	0.4728	0.4895	Alkaline D-peptidase
slr1926	0.8143	0.5952	0.4389	0.4759	1.1318	conserved hypothetical protein protein
slr1931	0.8658	0.4114	0.2881	0.3957	0.3299	hypothetical protein
slr1944	0.7072	0.3876	0.8821	0.4360	0.5174	hypothetical protein
slr1951	0.9960	0.5882	0.5846	0.9329	1.0896	hypothetical protein
slr1958	0.6231	0.6964	0.1034	0.1237	0.1069	hypothetical protein
slr1993	0.3609	0.3249	7.9454	2.8094	4.5535	acetyl-coa acetyltransferase
slr1994	0.3324	0.2353	36.2813	1.7976	2.2452	3-oxoacyl-(acyl-carrier protein) reductase
slr2002	0.6365	0.6116	3.6634	0.6859	0.6150	cyanophycin synthetase
slr2004	0.9756	0.5774	0.3327	0.6191	0.9117	hypothetical protein
slr2018	0.9091	0.5163	0.4457	0.5879	0.4674	hypothetical protein
slr2058	0.8576	0.6146	1.4499	0.3115	0.2736	DNA topoisomerase i
slr2060	0.6414	0.7174	0.4419	0.4802	0.5446	hypothetical protein
slr2089	0.8598	0.6386	4.0659	3.1985	2.9948	squalene--hopene cyclase (ec 5.4.99.-)

slr2100	0.7634	0.5139	1.1248	1.0344	0.9597	response regulator
slr2101	0.4805	1.0277	2.2926	0.7383	0.5095	conserved hypothetical protein
slr2144	0.6892	0.4673	1.1376	0.6134	0.3952	hypothetical protein
ssl1918	0.3541	0.3099	0.6017	1.3653	2.1090	hypothetical protein
ssl2501	0.1364	0.0810	0.2246	0.1279	0.1759	hypothetical protein
ssl3437	0.6083	0.4442	0.1098	0.0324	0.0404	30s ribosomal protein s17
ssr0482	0.6382	0.6072	0.1488	0.0354	0.0569	cyanelle ribosomal protein S16
ssr1600	0.6309	1.1521	0.1551	0.0453	0.0420	putative anti-sigma factor antagonist, putative
ssr2799	0.6072	0.5522	0.0935	0.0771	0.0549	50S ribosomal protein L27