

Table S3. Core proteome proteins observed in *E. coli* K12 MG1655 and *S. typhimurium* and their published genes noted as essential. (Source: Gerdes, et al. 2003. *J. Bacteriol.* 185(19):5673-5684; Knuth, et al. 2004. *Mol Microbiol.* 51(6):1729-1744)

Core Protein	<i>E. coli</i> Locus Tag	Essential in <i>E. coli</i>	<i>S. typhimurium</i> Locus Tag	Essential in <i>S. typhimurium</i>	Gene Symbol	Description
prot2	NT01EC2079	X	STM1336		<i>rplT</i>	Ribosomal protein L20
prot15	NT01EC2458		STM2076		<i>hisA</i>	Phosphoribosylformimino-5-aminoimidazole carboxamide ribotide isomerase
prot29	NT01EC3847		STM3304			Ribosomal protein L21 complement
prot30	NT01EC3846		STM3303			Ribosomal protein L27 complement
prot31	NT01EC3844	X	STM3301			GTP-binding protein, GTP1/Obg family complement
prot33	NT01EC0287		STM0322		<i>proA</i>	Gamma-glutamyl phosphate reductase
prot50	NT01EC3354	X	STM2953			CTP synthase complement
prot107	NT01EC1332		STM1195	X	<i>fabG</i>	3-oxoacyl-(acyl-carrier-protein) reductase
prot128	NT01EC3262		STM2829		<i>recA</i>	RecA protein
prot176	NT01EC2082	X	STM1333	X	<i>thrS</i>	Threonyl-tRNA synthetase
prot180	NT01EC3043	X	STM2526		<i>ndk</i>	Nucleoside diphosphate kinase
prot182	NT01EC0026	X	STM0046	X	<i>ileS</i>	Isoleucyl-tRNA synthetase complement
prot185	NT01EC5208	X	STM4475	X	<i>clpX</i>	Valyl-tRNA synthetase
prot186	NT01EC0538		STM0449		<i>tig</i>	ATP-dependent Clp protease, ATP-binding subunit
prot188	NT01EC0534		STM0447			Trigger factor
prot203	NT01EC1985	X	STM1449	X	<i>tyrS</i>	Tyrosyl-tRNA synthetase
prot211	NT01EC3831		STM3290		<i>argG</i>	Argininosuccinate synthase
prot221	NT01EC2075		STM1338	X	<i>pheT</i>	Phenylalanyl-tRNA synthetase, beta subunit
prot222	NT01EC2076	X	STM1337		<i>pheS</i>	Phenylalanyl-tRNA synthetase, alpha subunit
prot326	NT01EC0016		STM0013		<i>dnaJ</i>	Chaperone protein
prot330	NT01EC3107		STM2583		<i>lepA</i>	GTP-binding protein
prot334	NT01EC0791	X	STM0648		<i>leuS</i>	Leucyl-tRNA synthetase
prot338	NT01EC3555	X	STM3090	X	<i>metK</i>	S-adenosylmethionine synthetase
prot339	NT01EC4426		STM3730			Bifunctional 4-phosphopantothenoylecysteine decarboxylase/phosphopantothenoylecysteine synthetase
prot341	NT01EC4437	X	STM3740		<i>gmk</i>	Guanylate kinase
prot342	NT01EC0036		STM0067		<i>carB</i>	Carbamoyl-phosphate synthase, large subunit
prot345	NT01EC5194		STM4460		<i>pyrB</i>	Aspartate carbamoyltransferase
prot351	NT01EC2823		STM2384		<i>aroC</i>	Chorismate synthase
prot354	NT01EC3260	X	STM2827			Alanyl-tRNA synthetase complement

prot355	NT01EC3982		STM3416		<i>rpsD</i>	Ribosomal protein S4
prot361	NT01EC2267	X	STM1901	X	<i>aspS</i>	Aspartyl-tRNA synthetase
prot424	NT01EC0113	X	STM0133	X	<i>ftsZ</i>	Cell division protein
prot426	NT01EC0109	X	STM0129			UDP-N-acetylmuramate--alanine ligase complement
prot427	NT01EC0108	X	STM0128	X	<i>murG</i>	Undecaprenyldiphospho-muramoylpentapeptide beta-N-acetylglucosaminyltransferase
prot429	NT01EC0106	X	STM0126			UDP-N-acetylmuramoylalanine--D-glutamate ligase complement
prot480	NT01EC2459		STM2077		<i>hisF</i>	Imidazole glycerol phosphate synthase, cyclase subunit
prot488	NT01EC4095	X	STM3483		<i>rpe</i>	Ribulose-phosphate 3-epimerase
prot490	NT01EC3974	X	STM3407		<i>fmt</i>	Methionyl-tRNA formyltransferase
prot513	NT01EC3536	X	STM3069		<i>pgk</i>	Phosphoglycerate kinase
prot519	NT01EC4946		STM4254		<i>uvrA</i>	Excinuclease ABC, A subunit
prot526	NT01EC4688	X	STM3999	X	<i>polA</i>	DNA polymerase I
prot560	NT01EC1549	X	STM1714		<i>topA</i>	DNA topoisomerase I
prot578	NT01EC4870		STM4175		<i>purD</i>	Phosphoribosylamine-glycine ligase
prot698	NT01EC0645	X	STM0537		<i>cysS</i>	Cysteiny-tRNA synthetase
prot714	NT01EC1331	X	STM1194	X	<i>fabD</i>	Malonyl CoA-acyl carrier protein transacylase
prot723	NT01EC3151	X	STM2673		<i>rplS</i>	Ribosomal protein L19
prot729	NT01EC3156	X	STM2677		<i>fth</i>	Signal recognition particle protein
prot749	NT01EC2906	X	STM2415		<i>gltX</i>	Glutamyl-tRNA synthetase
prot750	NT01EC4581		STM3903		<i>llvE</i>	Branched-chain-amino-acid transaminase
prot752	NT01EC2557	X	STM2155	X	<i>metG</i>	Methionyl-tRNA synthetase
prot756	NT01EC4582		STM3904		<i>llvD</i>	Dihydroxy-acid dehydratase
prot774	NT01EC3568		STM3103		<i>rdgB</i>	Non-canonical purine NTP pyrophosphatase, rdgB/HAM1 family
prot789	NT01EC1466		STM1776		<i>prfA</i>	Peptide chain release factor 1, PrfA complement
prot854	NT01EC0116	X	STM0136		<i>secA</i>	Preprotein translocase ATPase subunit
prot879	NT01EC4621	X	STM3938		<i>hemC</i>	Hydroxymethylbilane synthase
prot901	NT01EC4701	X	STM4009		<i>bipA</i>	Virulence regulator BipA complement
prot902	NT01EC1457		STM1784			GTPase/translation factor
prot921	NT01EC3031		STM2510			GMP synthase complement
prot926	NT01EC5065		STM4329		<i>groES</i>	Chaperonin (GroES)
prot942	NT01EC3902	X	STM3344		<i>rpsI</i>	Ribosomal protein S9
prot943	NT01EC3903	X	STM3345		<i>rplM</i>	Ribosomal protein L13
prot953	NT01EC3981	X	STM3415	X	<i>rpoA</i>	DNA-directed RNA polymerase, alpha subunit

prot954	NT01EC3983		STM3417		<i>rpsK</i>	Ribosomal protein S11
prot955	NT01EC3984		STM3418		<i>rpsM</i>	Ribosomal protein S13
prot960	NT01EC3987	X	STM3421	X	<i>rplO</i>	Ribosomal protein L15
prot962	NT01EC3990	X	STM3423	X	<i>rpsE</i>	Ribosomal protein S5
prot963	NT01EC3991	X	STM3424		<i>rplR</i>	Ribosomal protein L18
prot964	NT01EC3993	X	STM3425	X	<i>rplF</i>	Ribosomal protein L6
prot965	NT01EC3995	X	STM3426		<i>rpsH</i>	Ribosomal protein S8
prot966	NT01EC3997	X	STM3428	X	<i>rplE</i>	Ribosomal protein L5
prot967	NT01EC3998	X	STM3429		<i>rplX</i>	Ribosomal protein L24
prot968	NT01EC4000	X	STM3430		<i>rplN</i>	Ribosomal protein L14
prot971	NT01EC4004	X	STM3433	X	<i>rplP</i>	Ribosomal protein L16
prot972	NT01EC4005	X	STM3434		<i>rpsC</i>	Ribosomal protein S3
prot973	NT01EC4006	X	STM3435		<i>rplV</i>	Ribosomal protein L22
prot975	NT01EC4010	X	STM3437	X	<i>rplB</i>	Ribosomal protein L2
prot976	NT01EC4011	X	STM3438		<i>rplW</i>	Ribosomal protein L23
prot977	NT01EC4013	X	STM3439	X	<i>rplD</i>	Ribosomal protein L4
prot978	NT01EC4015	X	STM3440	X	<i>rplC</i>	Ribosomal protein L3
prot982	NT01EC4040	X	STM3447	X	<i>rpsG</i>	Ribosomal protein S7
prot983	NT01EC4042	X	STM3448	X	<i>rpsG</i>	Ribosomal protein S12
prot987	NT01EC4847	X	STM4152	X	<i>rplL</i>	Ribosomal protein L7/L12
prot988	NT01EC4846	X	STM4151		<i>rplJ</i>	Ribosomal protein L10
prot990	NT01EC4844		STM4150		<i>rplA</i>	Ribosomal protein L1
prot991	NT01EC4842		STM4149		<i>rplK</i>	Ribosomal protein L11
prot1105	NT01EC3822	X	STM3282		<i>pnpA</i>	Polyribonucleotide nucleotidyltransferase
prot1106	NT01EC3823	X	STM3283		<i>rpsO</i>	Ribosomal protein S15
prot1113	NT01EC3826	X	STM3286	X	<i>infB</i>	Translation initiation factor IF-2 (InfB)
prot1121	NT01EC3040	X	STM2523		<i>ispG</i>	4-hydroxy-3-methylbut-2-en-1-yl diphosphate synthase
prot1132	NT01EC0202	X	STM0219		<i>frr</i>	Ribosome recycling factor
prot1135	NT01EC0197	X	STM0216		<i>rpsB</i>	Ribosomal protein S2
prot1153	NT01EC2920	X	STM2427	X	<i>ligA</i>	DNA ligase, NAD-dependent
prot1170	NT01EC1458	X	STM1783		<i>pth</i>	Peptidyl-tRNA hydrolase
prot1172	NT01EC1462	X	STM1780			Ribose-phosphate pyrophosphokinase
prot1200	NT01EC3353		STM2952	X	<i>eno</i>	Enolase
prot1215	NT01EC0648		STM0542	X	<i>folD</i>	Bifunctional 5,10-methylene-tetrahydrofolate dehydrogenase/5,10-methylene-tetrahydrofolate cyclohydrolase

prot1225	NT01EC4871		STM4176		<i>purH</i>	Bifunctional IMP cyclohydrolase/phosphoribosylaminoimidazolecarboxa mide formyltransferase
prot1286	NT01EC1088	X	STM0963	X	<i>serS</i>	Seryl-tRNA synthetase
prot1315	NT01EC4500		STM3837			DNA polymerase III, beta subunit
prot1333	NT01EC5137	X	STM4394		<i>rpLL</i>	Ribosomal protein L9
prot1443	NT01EC2802		STM2362		<i>purF</i>	Family C44 non-peptidase homologues
prot1462	NT01EC3160	X	STM2681		<i>grpE</i>	Heat shock protein
prot1463	NT01EC0015	X	STM0012	X	<i>dnaK</i>	Chaperone protein
prot1493	NT01EC5109		STM4366		<i>purA</i>	Adenylosuccinate synthetase
