Salmonella enterica subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 15

Catalog No. NR-19536

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Contributor:

Pathogen Functional Genomics Resource Center at the J. Craig Venter Institute

Manufacturer:

BEI Resources

Product Description:

Clone plates are replicated using a BioMek® FX robot. Production in the 96-well format has increased risk of cross-contamination between adjacent wells. Individual clones should be purified (e.g. single colony isolation and purification using good microbiological practices) and sequence-verified prior to use. BEI Resources only confirms the clone plate orientation and viability of randomly picked clones. BEI Resources does not confirm or validate individual clone identities provided by the contributor.

The *Salmonella enterica* subsp. *enterica (S. enterica* subsp. *enterica)*, strain Ty2 (serovar Typhi), Gateway® clone set consists of approximately 3380 sequence validated clones from *S. enterica* subsp. *enterica*, strain Ty2, cloned in *Escherichia coli (E. coli)* DH10B-T1 cells. Each open reading frame was constructed in vector pDONR™221 (Invitrogen™) with an ATG start codon and no stop codon. The sequence was validated by full length sequencing of each clone with greater than 1X coverage and a mutation rate of less than 0.2%. Detailed information about each clone is shown in Table 1.

Information related to the use of Gateway® Clones can be obtained from Invitrogen™. Recombination was facilitated through an *att*B substrate (*att*B-PCR product or a linearized *att*B expression clone) with an *att*P substrate (pDONR™221) to create an *att*L-containing entry clone. The entry clone contains recombinational cloning sites, *att*L1 and *att*L2 to facilitate gene transfer into a destination vector, M13 forward and reverse priming sites for sequencing and a kanamycin resistance gene for selection. Please refer to the Invitrogen™ Gateway® Technology Manual for additional details.

Plate orientation and viability were confirmed for NR-19536.

Material Provided:

Each inoculated well of the 96-well plate contains approximately 60 µL of *E. coli* culture (strain DH10B-T1) in Luria Bertani (LB) broth containing 50 µg/mL kanamycin supplemented with 15% glycerol.

Packaging/Storage:

NR-19536 was packaged aseptically in a 96-well plate. The product is provided frozen and should be stored at -80°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:

Media:
LB broth or agar containing 50 µg/mL kanamycin.
Incubation:
Temperature: 37°C
Atmosphere: Aerobic
Propagation:

1. Scrape top of frozen well with a pipette tip and streak onto agar plate.
2. Incubate the plates at 37°C for 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Salmonella enterica* subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 15, NR-19536."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:

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References:

1. Deng, W., et al. "Comparative Genomics of *Salmonella enterica* serovar Typhi strains Ty2 and CT18." J. Bacteriol. 185 (2003): 2330-2337. PubMed: 12644504.

Support Provided by NIAID

Table 1: *Salmonella enterica* subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 15 (ZSTDO)[1]

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
88942	A01	t4604	periplasmic protein	652	NP_808176.1	2
88730	A02	t0146	dephospho-CoA kinase	655	NP_804029.1	1.993893
88810	A03	t0335	hypothetical protein t0335	655	NP_804209.1	2
88970	A04	t0629	hypothetical protein t0629	655	NP_804481.1	2
88778	A05	t1255	two-component response regulator	655	NP_805058.1	2
88766	A06	t1323	electron transport complex protein RnfG	655	NP_805124.1	2
88662	A07	t1633	hypothetical protein t1633	655	NP_805411.1	2
88862	A08	t4189	formate-dependent nitrite reductase complex subunit NrfG	655	NP_807793.1	2
88842	A09	t4448	peptidyl-prolyl cis-trans isomerase	655	NP_808035.2	2
88946	A10	t0895	colanic acid capsular biosynthesis activation protein A	658	NP_804724.1	2
88670	A11	t1098	molecular chaperone LolB	658	NP_804912.1	2
88622	A12	t2412	ATP-dependent Clp protease proteolytic subunit	658	NP_806142.1	2
88894	B01	t3646	16SrRNA methyltransferase GidB	658	NP_807283.1	2
88646	B02	t0359	uracil phosphoribosyl	661	NP_804229.1	2
88746	B03	t1756	hypothetical protein t1756	661	NP_805531.1	2
88886	B04	t2827	protein-L-isoaspartate O-methyltransferase	661	NP_806524.1	2
88806	B05	t3042	hypothetical protein t3042	661	NP_806728.1	2
88910	B06	t3214	23S rRNA methyltransferase	661	NP_806890.1	2
88718	B07	t4591	DNA-binding transcriptional activator BglJ	661	NP_808166.1	2
88838	B08	t0827	hypothetical protein t0827	667	NP_804666.1	2
88870	B09	t1493	hypothetical protein t1493	667	NP_805279.1	2
88914	B10	t2499	RhtC-like transporter	667	NP_806227.1	2
88934	B11	t2599	hypothetical protein t2599, partial	667	NP_806316.1	2
88698	B12	t3106	ADP-ribose pyrophosphatase	667	NP_806789.1	1.998501
88858	C01	t3498	DNA-binding transcriptional repressor FabR	670	NP_807146.1	2
88702	C02	t4447	hypothetical protein t4447	670	NP_808034.1	2
88978	C03	t1148	leucine export protein LeuE	673	NP_804959.1	2
88874	C04	t1259	two-component response regulator	673	NP_805062.1	2
88626	C05	t1644	outer membrane protein	673	NP_805422.1	2
88630	C06	t1713	lipoprotein	673	NP_805489.1	2
88714	C07	t3259	stringent starvation protein A	673	NP_806934.1	2
88754	C08	t4462	methionine sulfoxide reductase A	673	NP_808049.1	2

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
88782	C09	t1294	riboflavin synthase subunit alpha	676	NP_805095.1	2
88726	C10	t2222	nicotinic acid mononucleotide adenylyltransferase	676	NP_805965.1	2
89197	C11	t2232	lipoate-protein ligase B	676	NP_805975.2	1.831361
89205	C12	t0516	glutathione-S transferase	679	NP_804373.1	2
89249	D01	t2372	adenylate kinase	679	NP_806103.1	1.835052
89193	D02	t4616	hypothetical protein t4616	679	NP_808188.1	2
89177	D03	t0569	hypothetical protein t0569	682	NP_804426.1	1.524927
89065	D04	t1287	type III secretion system protein	682	NP_805090.1	2
89021	D05	t1302	ribonuclease T	682	NP_805103.1	2
89185	D06	t1687	hypothetical protein t1687	682	NP_805463.1	2
89101	D07	t2882	L-fuculose phosphate aldolase	682	NP_806578.1	2
89305	D08	t4624	phosphoglycerate mutase	682	NP_808195.1	2
89157	D09	t0271	anti-RNA polymerase sigma factor SigE	685	NP_804147.1	2
89313	D10	t0595	transcriptional regulator RcsB	685	NP_804451.1	2
89069	D11	t0600	AlkB protein	685	NP_804456.1	2
89189	D12	t1141	hypothetical protein t1141	685	NP_804952.1	2
89153	E01	t1377	lipoprotein	685	NP_805173.1	2
89054	E02	t1675	transcriptional regulator NarL	685	NP_805452.1	2
89133	E03	t2801	AraC family transcriptional regulator	685	NP_806502.1	2
89217	E04	t3420	terminase endonuclease subunit	685	NP_807083.1	-
89041	E05	t4437	3-keto-L-gluconate-6-phosphate decarboxylase	685	NP_808024.1	2
89329	E06	t2290	dihydropteridine reductase	688	NP_806031.1	2
89285	E07	t2383	DNA-binding transcriptional repressor AcrR	688	NP_806113.1	2
89173	E08	t3115	3,4-dihydroxy-2-butanone 4-phosphate synthase	688	NP_806798.1	2
89209	E09	t3244	isoprenoid biosynthesis protein	688	NP_806920.1	2
89025	E10	t4265	hypothetical protein t4265	688	NP_807863.1	2
89009	E11	t0487	hypothetical protein t0487	691	NP_804344.1	2
89089	E12	t1000	hypothetical protein t1000	691	NP_804823.1	2
89005	F01	t1172	nicotinamidase/pyrazinamidase	691	NP_804980.1	2
88985	F02	t1316	pyridoxamine 5'-phosphate oxidase	691	NP_805117.1	2
89013	F03	t2164	hypothetical protein t2164	691	NP_805915.1	2
89125	F04	t2807	serine/threonine-specific protein phosphatase 2	691	NP_806506.1	2
89073	F05	t0497	hypothetical protein t0497	694	NP_804354.1	2
89117	F06	t0611	heme exporter protein B1	694	NP_804467.1	1.992795
89093	F07	t1065	hypothetical protein t1065	694	NP_804882.1	2
89169	F08	t1834	hypothetical protein t1834	694	NP_805605.1	2
88981	F09	t2059	glutamine ABC transporter permease	694	NP_805822.1	2
89345	F10	t2348	ABC transporter integral membrane protein	694	NP_806080.1	2
89241	F11	t3082	DedA family integral membrane protein	694	NP_806767.1	2
89045	F12	t0537	NADH dehydrogenase subunit B	697	NP_804394.1	2
89037	G01	t3844	3-keto-L-gluconate-6-phosphate decarboxylase	697	NP_807465.1	2
89161	G02	t3874	outer membrane lipoprotein	697	NP_807492.1	2
89245	G03	t4452	iron-sulfur cluster repair di-iron protein	697	NP_808039.1	1.998565
89273	G04	t1442	multiple drug resistance protein MarC	700	NP_805235.1	2
89265	G05	t4555	hypothetical protein t4555	700	NP_808133.1	2
89129	G06	t0322	hypothetical protein t0322	703	NP_804197.1	2
89033	G07	t2008	arginine transporter permease ArtM	703	NP_805771.1	2
89114	G08	t3785	orotate phosphoribosyltransferase	676	NP_807407.1	2
89354	G09	t0679	glutathione-S-transferase-family protein	679	NP_804528.1	2
89258	G10	t0962	chemotaxis regulator CheZ	679	NP_804786.1	2

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89098	G11	t0515	glutathione-S transferase	682	NP_804372.1	2
89058	G12	t1151	hypothetical protein t1151	682	NP_804962.1	2
89110	H01	t1413	ABC transporter membrane protein	682	NP_805208.1	2
89230	H02	t1537	ABC amino acid transporter permease	682	NP_805321.1	2
89202	H03	t1752	hypothetical protein t1752	682	NP_805527.1	2
89322	H04	t1755	glutaredoxin 2	682	NP_805530.1	2
89106	H05	t1937	hypothetical protein t1937	682	NP_805703.1	2
89082	H06	t3931	DNA-binding protein	682	NP_807543.1	1.368035
89222	H07	t1025	serine-threonine protein phosphatase 1	685	NP_804843.1	2
89146	H08	t1879	bacteriophage protein	685	NP_805647.1	2
89294	H09	t4318	phage terminase	685	NP_807913.1	1.99562
88994	H10	t3921	hypothetical protein t3921	688	NP_807534.1	2
89142	H11	t2994	ABC transporter ATP-binding protein	691	NP_806686.1	2
89282	H12	t0098	23S rRNA/tRNA pseudouridine synthase A	694	NP_803982.1	2

[1]All information in this table was provided by J. Craig Venter Institute at the time of deposition.

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