Salmonella enterica subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 18

Catalog No. NR-19539

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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-19539.

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-19539 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 18, NR-19539."

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.

Table 1: *Salmonella enterica* subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 18 (ZSTDR)[1]

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
90213	A01	t1088	hydrogenase 1 b-type cytochrome subunit	766	NP_804903.1	2
90157	A02	t1343	DNA-binding transcriptional regulator RstA	766	NP_805142.1	2
90453	A03	t1538	ABC transporter ATP-binding subunit	766	NP_805322.1	2
90309	A04	t1875	bacteriophage protein	766	NP_805643.1	2
90437	A05	t2601	DNA polymerase III subunit epsilon	766	NP_806317.1	1.992167
90421	A06	t2617	hypothetical protein t2617	766	NP_806328.1	2
90273	A07	t0189	chaperone protein EcpD	769	NP_804072.1	2
90201	A08	t1079	hypothetical protein t1079	769	NP_804896.1	2
90233	A09	t2520	transmembrane regulator	769	NP_806246.1	2
90285	A10	t4394	fumarate reductase iron-sulfur subunit	769	NP_807985.1	2
90165	A11	t0268	hypothetical protein t0268	772	NP_804144.1	1.996114
90417	A12	t0612	heme exporter protein C1	772	NP_804468.1	2
90133	B01	t0797	1-(5-phosphoribosyl)-5-[(5-phosphoribosylamino)methylideneamino] imidazole-4-carboxamide isomerase	772	NP_804639.1	2
90401	B02	t1249	hypothetical protein t1249	772	NP_805053.1	2
90461	B03	t1784	hydrolase	772	NP_805558.1	1.781088
90349	B04	t2619	outer membrane protein assembly complex subunit YfiO	772	NP_806330.1	2
90173	B05	t3094	1-acyl-glycerol-3-phosphate acyltransferase	772	NP_806778.1	2
90385	B06	t4586	DNA replication protein DnaC	772	NP_808161.1	2
90125	B07	t0978	hypothetical protein t0978	775	NP_804801.1	2
90237	B08	t2209	glutamate/aspartate transport system permease GltJ	775	NP_805953.1	2
90129	B09	t2538	hypothetical protein t2538	775	NP_806262.1	2
90149	B10	t3360	uroporphyrinogen-III synthase	775	NP_807028.1	2
90321	B11	t4256	hypothetical protein t4256	775	NP_807854.1	1.923871
90353	B12	t4457	adenosine-3'(2'),5'-biphosphate nucleotidase	775	NP_808044.1	1.887742
90329	C01	t4481	hypothetical protein t4481	775	NP_808068.1	1.485161
90241	C02	t0972	hypothetical protein t0972	778	NP_804795.1	2
90185	C03	t1646	hypothetical protein t1646	778	NP_805424.1	2
90189	C04	t2938	fimbrial chaperone protein	778	NP_806631.1	1.991003

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
90365	C05	t3386	uridine phosphorylase	778	NP_807050.1	2
90426	C06	t4403	arginine-binding periplasmic protein	754	NP_807994.1	2
90406	C07	t4613	purine nucleoside phosphorylase	754	NP_808185.1	2
90118	C08	t0926	DNA-binding transcriptional activator SdiA	757	NP_804754.1	2
90442	C09	t2022	nitroreductase A	757	NP_805785.1	2
90450	C10	t2060	glutamine ABC transporter ATP-binding protein	757	NP_805823.1	2
90170	C11	t2313	fimbriae Y protein	757	NP_806047.1	2
90194	C12	t3550	GntR family transcriptional regulator	757	NP_807195.1	2
90290	D01	t4053	hypothetical protein t4053	757	NP_807660.1	2
90222	D02	t0217	30S ribosomal protein S2	760	NP_804098.1	1.989474
90302	D03	t0847	precorrin-3B C17-methyltransferase	760	NP_804685.1	2
90362	D04	t2211	glutamate/aspartate transport ATP-binding protein GltL	760	NP_805955.1	2
90226	D05	t3236	ABC transporter ATP-binding protein YhbG	760	NP_806912.1	1.993421
90254	D06	t4590	regulatory protein	760	NP_808165.1	2
90470	D07	t1108	toxin subunit	763	NP_804922.1	2
90198	D08	t1378	hypothetical protein t1378	763	NP_805175.1	2
90482	D09	t1649	transport protein TonB	763	NP_805427.1	2
90334	D10	t3243	monofunctional biosynthetic peptidoglycan transglycosylase	763	NP_806919.1	2
90262	D11	t0311	RNA methyltransferase	766	NP_804186.1	2
90378	D12	t0693	permease transmembrane protein	766	NP_804541.1	2
90374	E01	t2006	arginine-binding periplasmic protein 1	766	NP_805769.1	2
90410	E02	t2009	arginine-binding periplasmic protein 2	766	NP_805772.1	2
90282	E03	t3006	16S ribosomal RNA methyltransferase RsmE	766	NP_806698.1	1.98564
90250	E04	t3385	nicotinamide riboside transporter PnuC	766	NP_807049.1	2
90206	E05	t4420	23S rRNA (guanosine-2'-O-)-methyltransferase	766	NP_808009.1	-
90146	E06	t1725	3-ketoacyl-ACP reductase	769	NP_805500.1	2
90266	E07	t2162	LamB/YcsF family protein	769	NP_805913.1	2
90370	E08	t2650	hypothetical protein t2650	769	NP_806361.1	2
90382	E09	t2847	phosphoadenosine phosphosulfate reducatase	769	NP_806544.1	2
90306	E10	t3079	biopolymer transport protein ExbB	769	NP_806764.1	2
90390	E11	t0898	flagellar biosynthesis protein FliP	772	NP_804727.1	2
90466	E12	t1620	orotidine 5'-phosphate decarboxylase	772	NP_805398.1	2
90122	F01	t2158	hypothetical protein t2158	775	NP_805909.1	2
90338	F02	t2559	periplasmic fimbrial chaperone protein	775	NP_806280.1	2
90110	F03	t3368	UDP-N-acetyl-D-mannosaminuronic acid transferase	775	NP_807032.1	2
90342	F04	t3415	hypothetical protein t3415	775	NP_807078.1	2
90318	F05	t3968	cytoplasmic glycerophosphodiester phosphodiesterase	775	NP_807578.1	2
90230	F06	t0145	hypothetical protein t0145	778	NP_804028.1	1.982005
90298	F07	t0857	cobalamin synthase	778	NP_804692.1	2
90474	F08	t2165	hydrolase-oxidase	778	NP_805916.1	2
90258	F09	t3733	GntR family transcriptional regulator	778	NP_807366.1	1.989717
90434	F10	t0711	GntR family transcriptional regulator	781	NP_804558.1	1.952625
90617	F11	t1432	3-hydroxy acid dehydrogenase	781	NP_805225.1	2

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Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
90645	F12	t3701	heme exporter protein C2	781	NP_807336.1	1.90525
90509	G01	t1917	replication protein	784	NP_805684.1	2
90797	G02	t0925	amino-acid ABC transporter ATP-binding protein YecC	787	NP_804753.1	2
90773	G03	t1617	regulatory protein	787	NP_805395.1	2
90601	G04	t1895	prophage terminase small subunit	787	NP_805663.1	1.97967
90685	G05	t2956	lipoprotein	787	NP_806648.1	1.870394
90657	G06	t3601	hypothetical protein t3601	787	NP_807243.1	2
90813	G07	t4534	fimbrial chaperone protein	787	NP_808116.1	2
90677	G08	t0985	high-affinity zinc transporter ATPase	790	NP_804808.1	2
90593	G09	t3555	CDP-diacylglycerol pyrophosphatase	790	NP_807200.1	2
90757	G10	t3674	hypothetical protein t3674	790	NP_807310.1	1.993671
90689	G11	t0222	undecaprenyl pyrophosphate synthase	793	NP_804103.1	2
90789	G12	t1231	3-dehydroquinate dehydratase	793	NP_805037.1	1.954603
90853	H01	t2935	hypothetical protein t2935	793	NP_806628.1	2
90513	H02	t2997	hypothetical protein t2997	793	NP_806689.1	1.989912
90529	H03	t3923	methyltransferase	793	NP_807536.1	1.78058
90761	H04	t3990	DNA-binding transcriptional repressor GlpR	793	NP_807600.1	2
90521	H05	t4122	deoR family regulatory protein	793	NP_807726.1	2
90537	H06	t0428	sulfate transport protein	796	NP_804297.1	2
90713	H07	t0434	hypothetical protein t0434	796	NP_804303.1	2
90737	H08	t2522	fimbrial chaperone protein	796	NP_806248.1	2
90493	H09	t2828	stationary phase survival protein SurE	796	NP_806525.1	2
90545	H10	t3329	uridine phosphorylase	796	NP_806997.1	2
90501	H11	t3973	hypothetical protein t3973	796	NP_807583.1	1.983668
90681	H12	t4202	AraC family transcriptional regulator	796	NP_807806.1	2

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

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