

***Salmonella enterica* subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5**

Catalog No. NR-19526

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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 *attB* substrate (*attB*-PCR product or a linearized *attB* expression clone) with an *attP* substrate (pDONR™221) to create an *attL*-containing entry clone. The entry clone contains recombinational cloning sites, *attL1* and *attL2* 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-19526.

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-19526 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 5, NR-19526."

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.

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Table 1: *Salmonella enterica* subsp. *enterica*, Strain Ty2 (Serovar Typhi), Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5 (ZSTDE)¹

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
83633	A01	t4284	hypothetical protein t4284	331	NP_807882.1	3
83705	A02	t3151	hypothetical protein t3151	334	NP_806832.1	2.859281
83553	A03	t3412	lipoprotein	334	NP_807075.1	2.976048
83609	A04	t0545	NADH dehydrogenase subunit K	337	NP_804402.1	3
83686	A05	t0521	sugar phosphotransferase subunit IIB	307	NP_804378.1	1.889251
83518	A06	t2933	hypothetical protein t2933	307	NP_806627.1	1.983713
83506	A07	t4548	hypothetical protein t4548	310	NP_808126.1	2
83346	A08	t1864	hypothetical protein t1864	313	NP_805633.1	2
83422	A09	t1900	prophage membrane protein	316	NP_805668.1	1.996835
83658	A10	t2133	hypothetical protein t2133	316	NP_805887.1	2
83370	A11	t4169	hypothetical protein t4169	316	NP_807773.1	2
83606	A12	t0474	hypothetical protein t0474	319	NP_804332.1	2
83618	B01	t0030	hypothetical protein t0030	322	NP_803914.1	2
83374	B02	t0079	ferredoxin like protein FixX	322	NP_803963.1	2
83590	B03	t3867	hypothetical protein t3867	322	NP_807485.1	2
83646	B04	t0995	DNA damage-inducible protein YebG	325	NP_804818.1	2
83538	B05	t2589	hypothetical protein t2589	325	NP_806306.1	2
83654	B06	t1748	anti-sigma28 factor FlgM	328	NP_805523.1	2
83450	B07	t2567	hypothetical protein t2567	328	NP_806286.1	2
83526	B08	t3744	hypothetical protein t3744	328	NP_807375.1	2
83542	B09	t4358	hypothetical protein t4358	328	NP_807951.1	2
83694	B10	t2244	citrate lyase subunit gamma	331	NP_805986.1	2
83714	B11	t3226	anti-sigma factor antagonist	331	NP_806902.1	2
83678	B12	t3300	fis family transcriptional regulator	331	NP_806975.1	2
83438	C01	t1220	integration host factor subunit alpha	334	NP_805026.1	2
83530	C02	t1454	hydrogenase isoenzyme formation protein	334	NP_805246.1	2
83342	C03	t2692	transcriptional regulator	334	NP_806400.1	2
83394	C04	t0727	hypothetical protein t0727	337	NP_804571.1	2
84641	C05	t2664	phage tail protein	337	NP_806375.1	2
84805	C06	t3862	lipoprotein	337	NP_807481.1	1.721068
84829	C07	t4067	50S ribosomal protein L23	337	NP_807674.1	1.949555
84589	C08	t4299	phage tail protein	337	NP_807896.1	2.988131
84473	C09	t4476	hypothetical protein t4476	337	NP_808063.1	3
84729	C10	t2774	pathogenicity island 1 effector protein	340	NP_806475.1	2.732353

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
84545	C11	t3149	hypothetical protein t3149	340	NP_806830.1	2.929412
84593	C12	t4078	30S ribosomal protein S14	340	NP_807685.1	2.970588
84701	D01	t4229	hypothetical protein t4229	340	NP_807831.1	2.876471
84553	D02	t2486	hypothetical protein t2486	343	NP_806214.1	3
84681	D03	t0087	hypothetical protein t0087	346	NP_803971.1	2
84585	D04	t1156	hypothetical protein t1156	346	NP_804967.1	2.66185
84565	D05	t1375	hypothetical protein t1375	346	NP_805171.1	2.947977
84581	D06	t2312	hypothetical protein t2312	346	NP_806046.1	2.893064
84633	D07	t2832	cell division protein FtsB	346	NP_806529.1	2.468208
84713	D08	t2968	hypothetical protein t2968	346	NP_806660.1	2.682081
84501	D09	t3221	50S ribosomal protein L21	346	NP_806897.1	2.66185
84621	D10	t3590	hypothetical protein t3590	346	NP_807233.1	3
84469	D11	t0708	hypothetical protein t0708	349	NP_804555.1	2.936963
84817	D12	t1132	lipoprotein	349	NP_804944.1	-
84653	E01	t1209	hypothetical protein t1209	349	NP_805016.1	2
84521	E02	t1591	thiosulfate:cyanide sulfurtransferase	349	NP_805373.1	3
84749	E03	t3576	hypothetical protein t3576	349	NP_807219.1	2.868195
84797	E04	t4180	hypothetical protein t4180	349	NP_807784.1	2.787966
84549	E05	t1841	heat shock protein HspQ	352	NP_805610.1	2.954545
84497	E06	t2225	hypothetical protein t2225	352	NP_805968.1	3
84505	E07	t2414	transcriptional regulator BolA	352	NP_806144.1	3
84661	E08	t3191	GIY-YIG nuclease superfamily protein	352	NP_806869.1	1.650568
84561	E09	t3519	transcriptional repressor protein MetJ	352	NP_807167.1	2.801136
84721	E10	t4390	quaternary ammonium compound-resistance protein SugE	352	NP_807981.1	2.764205
84665	E11	t1191	PTS system N,N'-diacetylchitobiose-specific transporter subunit IIB	355	NP_804998.1	2.630986
84481	E12	t1774	hypothetical protein t1774	355	NP_805548.1	3
84757	F01	t1989	ATP-dependent Clp protease adaptor protein ClpS	355	NP_805752.1	2.988732
84769	F02	t2011	phosphotransferase enzyme II subunit B	355	NP_805774.1	2.971831
84765	F03	t2480	hypothetical protein t2480	355	NP_806208.1	2.760563
84693	F04	t2905	hypothetical protein t2905	355	NP_806599.1	2.76338
84789	F05	t4528	P4 phage protein	355	NP_808113.1	2.538028
84645	F06	t0257	hypothetical protein t0257	358	NP_804134.1	2.932961
84617	F07	t2003	hypothetical protein t2003	358	NP_805766.1	3
84529	F08	t3740	DNA-binding protein	358	NP_807372.1	3
84489	F09	t4429	hypothetical protein t4429	358	NP_808016.1	3
84689	F10	t1139	hypothetical protein t1139	361	NP_804951.1	3
84813	F11	t1265	pathogenicity island protein	361	NP_805068.1	2.99169
84801	F12	t1376	hypothetical protein t1376	361	NP_805172.1	3
84509	G01	t1619	translation initiation factor Sui1	361	NP_805397.1	3
84525	G02	t1775	autoagglutination protein	361	NP_805549.1	3
84613	G03	t2698	hypothetical protein t2698	361	NP_806406.1	2.916898
84705	G04	t2809	hypothetical protein t2809	361	NP_806508.1	2.911357
84833	G05	t3021	hypothetical protein t3021	361	NP_806713.1	3
84697	G06	t1403	Multidrug efflux system protein MdtI	364	NP_805198.1	2.925824
84753	G07	t1475	acid-resistance protein	364	NP_805264.1	2.667582
84841	G08	t1652	dsDNA-mimic protein	364	NP_805430.1	2.994505
84493	G09	t1684	hypothetical protein t1684	364	NP_805460.1	2.868132
84837	G10	t2375	hypothetical protein t2375	364	NP_806106.1	2.835165

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
84534	G11	t2874	hypothetical protein t2874	364	NP_806570.1	1.708791
84478	G12	t1878	bacteriophage protein	337	NP_805646.1	2
84638	H01	t1907	bacteriophage protein	340	NP_805675.1	2
84786	H02	t1622	hypothetical protein t1622	343	NP_805400.1	2
84574	H03	t4412	RNA-binding protein Hfq	343	NP_808001.1	2
84630	H04	t0552	hypothetical protein t0552	346	NP_804409.1	2
84782	H05	t0884	hypothetical protein t0884	346	NP_804714.1	2
84514	H06	t4044	hypothetical protein t4044	346	NP_807651.1	2
84602	H07	t0909	flagellar hook-basal body protein FliE	349	NP_804738.1	2
84598	H08	t3101	hypothetical protein t3101	349	NP_806784.1	2
84810	H09	t4076	50S ribosomal protein L24	349	NP_807683.1	2
84686	H10	t4443	primosomal replication protein N	349	NP_808030.1	2
84778	H11	t2655	hypothetical protein t2655	355	NP_806366.1	2
84518	H12	t3354	frataxin-like protein	355	NP_807022.1	2

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