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SUPPORTING INFECTIOUS DISEASE RESEARCH

Salmonella enterica subsp. enterica, Strain Ty2 (Serovar Typhi), Gateway[®] Clone Set, Recombinant in *Escherichia coli*, Plate 3

Catalog No. NR-19524

This reagent is the tangible property of the U.S. Government.

For research use only. Not for human use.

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 crosscontamination 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 <u>pDONRTM221</u> (InvitrogenTM) 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 InvitrogenTM. Recombination was facilitated through an *att*B substrate (*att*B-PCR product or a linearized *att*B expression clone) with an *att*P substrate (pDONRTM221) 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 InvitrogenTM <u>Gateway[®] Technology Manual</u> for additional details.

Plate orientation and viability were confirmed for NR-19524.

Material Provided:

Each inoculated well of the 96-well plate contains approximately 60 μ L of *E. coli* culture (strain DH10B-T1) in Luria Bertani (LB) broth containing 50 μ g/mL kanamycin

supplemented with 15% glycerol.

Packaging/Storage:

NR-19524 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:

<u>Media</u>: LB broth or agar containing 50 μg/mL kanamycin. <u>Incubation</u>: Temperature: 37°C Atmosphere: Aerobic <u>Propagation</u>: 1. Scrape top of frozen well with a pipette tip

- 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 3, NR-19524."

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. <u>Biosafety in</u> <u>Microbiological and Biomedical Laboratories</u>. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see <u>www.cdc.gov/biosafety/publications/bmbl5/index.htm</u>.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

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References:

 Deng, W., et al. "Comparative Genomics of Salmonella enterica serovar Typhi strains Ty2 and CT18." <u>J.</u> <u>Bacteriol.</u> 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 3 (ZSTDC)¹

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
83091	A01	t3408	hypothetical protein t3408	262	NP_807071.1	3
83101	A02	t4001	ferrous iron transport protein A	262	NP_807611.1	3
83077	A03	t4527	hypothetical protein t4527	262	NP_808112.1	2.874046
82987	A04	t0384	hypothetical protein t0384	265	NP_804253.1	2.320755
83107	A05	t1001	DNA polymerase III subunit theta	265	NP_804824.1	3
82999	A06	t1379	hypothetical protein t1379	265	NP_805174.1	3
83123	A07	t1394	hypothetical protein t1394	265	NP_805189.1	3
83067	A08	t1509	hypothetical protein t1509	265	NP_805295.1	3
82989	A09	t1512	hypothetical protein t1512	265	NP_805298.1	1.913208
83151	A10	t1679	cation transport regulator	265	NP_805455.1	3
83049	A11	t0911	hypothetical protein t0911	268	NP_804740.1	3
83009	A12	t0870	hypothetical protein t0870	271	NP_804703.1	2.98893
83039	B01	t1311	hypothetical protein t1311	271	NP_805112.1	3
83095	B02	t1577	lipoprotein	271	NP_805359.1	2
83125	B03	t2297	hypothetical protein t2297	271	NP_806038.1	2.98893
83011	B04	t3790	DNA repair protein RadC	271	NP_807411.1	2.97417
82973	B05	t3999	hypothetical protein t3999	271	NP_807609.1	2
83094	B06	t0422	hypothetical protein t0422	274	NP_804292.1	2
83113	B07	t0942	hypothetical protein t0942	274	NP_804767.1	3
83033	B08	t1027	hypothetical protein t1027	274	NP_804845.1	2.846715
82977	B09	t1113	virulence protein	274	NP_804926.1	3
82975	B10	t1244	major outer membrane lipoprotein	274	NP_805049.1	3
83007	B11	t1306	hypothetical protein t1306	274	NP_805107.1	-
83024	B12	t1329	oriC-binding nucleoid-associated protein	250	NP_805130.1	2
82966	C01	t0240	hypothetical protein t0240	253	NP_804120.1	2
83138	C02	t1592	peripheral inner membrane phage- shock protein	253	NP_805374.1	1.964427
83058	C03	t1980	translation initiation factor IF-1	253	NP_805744.1	2
83142	C04	t2387	hemolysin expression-modulating protein	253	NP_806117.1	2
82980	C05	t2651	hypothetical protein t2651	253	NP_806362.1	2
83104	C06	t2916	lipoprotein	253	NP_806610.1	2
83002	C07	t4051	hypothetical protein t4051	253	NP_807658.1	2
83140	C08	t4222	hypothetical protein t4222	253	NP_807824.1	2

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Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
83018	C09	t4236	hypothetical protein t4236	253	NP_807838.1	2
83082	C10	t0338	hypothetical protein t0338	256	NP 804212.1	2
82986	C11	t1094	hypothetical protein t1094, partial	256	NP 804908.1	1.75
83054	C12	t3403	hypothetical protein t3043	256	NP 807066.1	2
83070	D01	t0085	hypothetical protein t0085	259	NP 803969.1	1.945946
83136	D02	t1594	phage shock protein B	259	NP 805376.1	2
83132	D03	t2502	hypothetical protein t2502	259	NP 806230.1	2
83118	D04	t4045	hypothetical protein t4045	259	NP 807652.1	2
82970	D05	t0627	hypothetical protein t0627	262	NP 804479 1	1 896947
83076	D06	t0893	hypothetical protein t0893	262	NP 804722.1	2
83030	D07	t1127	hypothetical protein t1127	262	NP 804939 1	2
83150	D08	t1275	nathogenicity island protein	262	NP 805078 1	2
83016	D09	t1768	hypothetical protein t1768	262	NP 8055/21	2
83062	D03	+2801	linoprotein	202	NP 806587.1	1 08855
92014	D10	12091	hypothetical protein t3166	202	ND 206945 1	2
03014		+4444	20 ribosomal protein \$18	202	NF_000045.1	2
62996	D12	14444	30 hbosomai protein 516	202	NP_606031.1	2
83080	E01	10081	lipoprotein	265	NP_803965.1	2
82982	E02	t1502	nypotnetical protein t1502	268	NP_805288.1	1.899254
83146	E03	t1724	acyl carrier protein	271	NP_805499.1	1.915129
83042	E04	t0058	oxaloacetate decarboxylase subunit gamma	274	NP_803942.1	2
83116	E05	t1037	hypothetical protein t1037	274	NP_804854.1	2
83173	E06	t3530	hypothetical protein t3530	274	NP_807177.1	2
83281	E07	t4523	bacteriophage gene regulatory protein	274	NP_808108.1	2.715328
83253	E08	t4546	hypothetical protein t4546	274	NP_808124.1	2.813869
83189	E09	t0458	hypothetical protein t0458	277	NP_804321.1	3
83235	E10	t2775	pathogenicity island 1 effector protein	277	NP_806476.1	1.99278
83193	E11	t3268	oxaloacetate decarboxylase subunit gamma	277	NP_806943.1	2.833935
83221	E12	t3296	hypothetical protein t3296	277	NP_806971.1	3
83207	F01	t4150	phage shock protein G	277	NP 807754.1	2.931408
83287	F02	t0890	hypothetical protein t0890	280	NP 804719.1	2.992857
83307	F03	t1758	DNA damage-inducible protein I	280	NP 805533.1	2.982143
83327	F04	t2145	hypothetical protein t2145	280	NP 805899.1	1.646429
83169	F05	t2302	copper-binding protein	280	NP 806041.1	2,696429
83265	F06	t2702	glutaredoxin-like protein	280	NP 806409.1	3
83153	F07	t3579	hypothetical protein t3579	280	NP 8072221	3
83211	F08	t3944	sulfur transfer protein SirA	280	NP 807555 1	3
83239	F09	t4128	hypothetical protein t4128	280	NP 8077321	2 735714
83251	F10	t0490	DNA-binding protein	283	NP 804347 1	3
83220	F11	t11/5	bypothetical protein t1145	200	NP 80/056 1	2
83105	F12	t1153	hypothetical protein t1153	200	NP 804064 1	2 800187
92215	C01	+1276	nypolitelical protein (1135	200	ND 205070 1	2.009107
03213	601	+1722	by nother total protein t1722	200	NF_000079.1	2.902332
03203	<u>GUZ</u>	+1029		200	ND 905005 4	J 1 090200
00000	603	1320		200	ND 0064044	1.303033
03243	G04	12/03	acyl carrier protein	203	NP_80484.1	2.90000
83303	GU5	11155	nypotnetical protein t1155	280	NP_804966.1	2.863636
83339	G06	t1405	acid shock protein	286	NP_805200.2	2.937063
83205	G07	t3817	giutaredoxin 3	286	NP_807439.1	2.986014
83289	G08	t0585	2Fe-2S terredoxin	289	NP_804442.1	2.294118
83267	G09	t1315	lipoprotein, partial	289	NP_805116.1	2.986159

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Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
83315	G10	t1364	hypothetical protein t1364	289	NP_805160.1	2.927336
83263	G11	t1566	hypothetical protein t1566	289	NP_805348.1	3
83223	G12	t0426	PTS system phosphohistidinoprotein- hexose phosphotransferase subunit Hpr	292	NP_804295.1	3
83245	H01	t0559	polymyxin B resistance protein	292	NP_804416.1	3
83317	H02	t3220	50S ribosomal protein L27	292	NP_806896.1	3
83293	H03	t4104	hypothetical protein t4104	292	NP_807711.1	1.972603
83247	H04	t4551	hypothetical protein t4551	292	NP_808129.1	3
83277	H05	t0281	ferredoxin	295	NP_804157.1	3
83273	H06	t0352	hypothetical protein t0352	295	NP_804222.1	3
83261	H07	t0619	hypothetical protein t0619	295	NP_804475.1	2.871186
83331	H08	t2065	hypothetical protein t2065	295	NP_805827.1	2.989831
83225	H09	t2391	50S ribosomal protein L31	295	NP_806121.1	2.989831
83183	H10	t2565	hypothetical protein t2565	295	NP_806284.1	2.972881
83285	H11	t2791	virulence-associated secretory protein	295	NP_806492.1	3
83319	H12	t3396	acetolactate synthase 2 regulatory subunit	295	NP_807060.1	3

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