Streptococcus pneumoniae Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 16

Catalog No. NR-19583

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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 *Streptococcus pneumoniae* (*S. pneumoniae*) Gateway® clone set consists of approximately 2029 sequence validated clones from *S. pneumonia*, strain TIGR4 cloned in *Escherichia coli* (*E. coli*) DH10B-T1 cells.[1] Each open reading frame was constructed in vector pDONR™221 (Invitrogen™) with a native 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-19583.

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-19583 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 containing 50 µg/mL kanamycin
LB 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 18 to 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Streptococcus pneumoniae* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 16, NR-19583."

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:

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

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References:

1. Kwon, K., et al. "A Correlation Analysis of Protein Characteristics Associated with Genome-Wide High Throughput Expression and Solubility of *Streptococcus pneumoniae* Proteins." Protein Expr. Purif. 55 (2007): 368-378. PubMed: 17703947.

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Support Provided by NIAID

Table 1: *Streptococcus pneumoniae* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 16 (YSPCQ)[1]

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
67521	A01	SP1335	hypothetical protein SP_1335	1410	NP_345793.1	20.825
67429	A02	SP2018	transposase	1003	-	2.6152
67345	A03	SP0911	hypothetical protein SP_0911	870	NP_345396.1	8.5931
67393	A04	SP0866	hypothetical protein SP_0866	837	NP_345353.1	8.1864
67509	A05	SP0068	hypothetical protein SP_0068	195	NP_344617.1	3.8923
67525	A06	SP0531	bacteriocin BlpI	561	NP_345048.1	3.4866
67317	A07	SP1514	F0F1 ATP synthase subunit C	193	NP_345965.1	3
67281	A08	SP0134	hypothetical protein SP_0134	243	NP_344677.1	12.988
67421	A09	SP1904	hypothetical protein SP_1904	532	NP_346335.1	2
67221	A10	SP0584	transcriptional regulator	609	NP_345097.1	5.0279
67438	A11	SP0451	hypothetical protein SP_0451	504	NP_344972.1	3.1171
67397	A12	SP2119	transcriptional regulator	1528	NP_346538.1	3.411
67873	B01	SP1065	hypothetical protein SP_1065	1020	NP_345539.1	10.931
67569	B02	SP0418	acyl carrier protein	477	NP_344941.1	4.3375
67577	B03	SP1948	hypothetical protein SP_1948	766	NP_346376.1	2
67905	B04	SP0055	hypothetical protein SP_0055	180	NP_344604.1	3.95
67790	B05	SP1694	hypothetical protein SP_1694	919	NP_346132.1	4.3079
67766	B06	SP0041	bacteriocin BlpU	114	NP_344590.1	-
67865	B07	SP0840	hypothetical protein SP_0840	810	NP_345331.1	9.1074
67729	B08	SP1594	hypothetical protein SP_1592	406		4
67693	B09	SP0116	hypothetical protein SP_0116	235	NP_344662.1	14.936
67845	B11	SP0539	bacteriocin BlpM	570	NP_345056.1	4.7175
67621	B12	SP0238	hypothetical protein SP_0238	318	NP_344778.1	5.6352
67534	C01	SP0733	hypothetical protein SP_0733	711	NP_345233.1	12.105
67797	C02	SP1113	DNA-binding protein HU	1095	NP_345584.1	10.742
67637	C03	SP1349	hypothetical protein SP_1349	1473	NP_345807.1	10.688
67749	C04	SP1404	hypothetical protein SP_1404	1800	NP_345862.1	13.55
67841	C05	SP1048	hypothetical protein SP_1048	1005	NP_345522.1	10.816
67753	C06	SP0471	hypothetical protein SP_0471	519	NP_344990.1	2.9114
67586	C07	SP0109	bacteriocin	231	NP_344656.1	15
67785	C08	SP2029	preprotein translocase subunit YajC	1069	NP_346454.1	1.8447
67757	C09	SP0208	30S ribosomal protein S10	300	NP_344748.1	4.62
67821	C10	SP0492	hypothetical protein SP_0492	537	NP_345010.1	4.0205

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Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
67801	C11	SP0819	IS630-Spn1, transposase Orf2	792	NP_345311.1	9.1136
67561	C12	SP1066	IS1381, transposase OrfA	1020	-	8.8265
67649	D01	SP1294	camphor resistance protein CrcB	1335	NP_345758.1	12.446
67837	D02	SP0883	hypothetical protein SP_0883	849	NP_345370.1	7.8598
67597	D03	SP0207	hypothetical protein SP_0207	298	NP_344747.1	5.6846
67689	D04	SP1487	hypothetical protein SP_1487	163	NP_345939.1	4
67665	D05	SP1708	hypothetical protein SP_1708	970	NP_346146.1	4.3711
67745	D06	SP0990	hypothetical protein SP_0990	948	NP_345469.1	9.1097
67593	D07	SP1744	iojap-related protein	1297	NP_346180.1	3.3192
67629	D08	SP0412	hypothetical protein SP_0412	474	NP_344935.1	4.3418
67901	D09	SP1218	hypothetical protein SP_1218	1227	NP_345684.1	7.6365
67725	D10	SP2042	ribonuclease P	1192	NP_346467.1	2.9069
67793	D11	SP0962	lactoylglutathione lyase	921	NP_345443.1	6.9989
67869	D12	SP1334	hypothetical protein SP_1334	1407	NP_345792.1	20.1
67733	E01	SP1567	endoribonuclease L-PSP	283	NP_346014.1	4
68037	E02	SP0941	IS1381 transposase protein B	897	NP_345424.1	9.0011
68069	E03	SP0968	diacylglycerol kinase	927	NP_345449.1	8.5566
68074	E04	SP2074	transposase	1312	-	1.3323
68053	E05	SP0189	hypothetical protein SP_0188	288	NP_344730.1	4.2326
67945	E06	SP1310	IS1381 transposase protein A	1344	NP_345771.1	11.839
68249	E07	SP1851	hypothetical protein SP_1851	349	NP_346283.1	2
68005	E08	SP0015	IS630-Spn1, transposase Orf1	102	NP_344568.1	-
68161	E09	SP2015	IS630-Spn1, transposase Orf1	988	NP_346442.1	1.9706
67917	E10	SP0424	(3R)-hydroxymyristoyl-ACP dehydratase	480	NP_344947.1	4.2583
68241	E11	SP0433	transcription antitermination protein NusB	489	NP_344955.1	5.7546
68050	E12	SP0817	MutT/nudix family protein	792	NP_345310.1	9.5859
68257	F01	SP1140	hypothetical protein SP_1140	1137	NP_345610.1	9.6403
68145	F02	SP0416	MarR family transcriptional regulator	474	NP_344939.1	2.981
68265	F03	SP1636	Rrf2 family protein	664	NP_346076.1	5.6114
68030	F04	SP0849	-	822	-	8.9197
68117	F05	SP0229	50S ribosomal protein L15	312	NP_344769.1	5.25
68129	F06	SP0135	glycosyl transferase	246	NP_344678.1	11.963
68217	F07	SP1297	flavodoxin	1338	NP_345761.1	10.918
68237	F08	SP2165	fucose operon FucU protein	1861	NP_346579.1	3.5943
67981	F09	SP1127	hypothetical protein SP_1127	1116	NP_345597.1	10.571
68102	F10	SP1520	acetyltransferase	196	NP_345970.1	3
67929	F11	SP0992	hypothetical protein SP_0992	951	NP_345471.1	8.4101
68285	F12	SP0024	hypothetical protein SP_0024	105	NP_344575.1	2
68137	G01	SP0811	transposase family protein	786	NP_345307.1	9.374
68090	G02	SP0507	type I restriction-modification system, S subunit	546	NP_345025.1	7.0678
68645	G03	SP0719	hypothetical protein SP_0719	702	NP_345220.1	13.729
68473	G04	SP1773	-	142	-	1.9014
68457	G05	SP1346	hypothetical protein SP_1346	1455	NP_345804.1	15.96
68489	G06	SP0205	anaerobic ribonucleoside-triphosphate reductase activating protein	297	NP_344745.1	4.2323
68593	G07	SP0179	Holliday junction DNA helicase RuvA	282	NP_344720.1	3.1596
68357	G08	SP0370	Holliday junction-specific endonuclease	444	NP_344897.1	3.3153

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68369	G09	SP1170	hypothetical protein SP_1170	1176	NP_345639.1	8.881
68477	G10	SP1041	hypothetical protein SP_1041	996	NP_345516.1	7.6596
68401	G11	SP1625	cadmium resistance transporter	621	NP_346065.1	3.0628
68617	G12	SP0589	serine acetyltransferase	609	NP_345102.1	3.197
68553	H01	SP1134	hypothetical protein SP_1134	1128	NP_345604.1	10.676
68493	H02	SP1007	hypothetical protein SP_1007	960	NP_345483.1	8.974
68521	H03	SP1601	hypothetical protein SP_1601	433	NP_346045.1	3.8891
68501	H04	SP0104	HAD superfamily hydrolase	228	NP_344651.1	17.943
68373	H05	SP0725	thiamine-phosphate pyrophosphorylase	705	NP_345226.1	13.691
68301	H06	SP1957	ABC transporter ATP-binding protein	793	NP_346384.1	2
68417	H07	SP0695	HesA/MoeB/ThiF family protein	690	NP_345200.1	11.038
68333	H08	SP0687	ABC transporter ATP-binding protein	681	NP_345192.1	13.088
68565	H09	SP0851	glycerol-3-phosphate acyltransferase PlsY	825	NP_345340.1	8.6618
68537	H10	SP0489	PAP2 family protein	534	NP_345007.1	2.191
68413	H11	SP0721	hypothetical protein SP_0721	702	NP_345222.1	12
68601	H12	SP1992	cell wall surface anchor family protein	883	NP_346419.1	2

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

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