Product Information Sheet for NR-19501

Staphylococcus aureus (MRSA), Strain COL Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5

Catalog No. NR-19501

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:

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 does not confirm or validate individual mutants provided by the contributor.

The methicillin-resistant *Staphylococcus aureus (S. aureus)*, strain COL Gateway® clone set consists of 25 plates which contain 2343 sequence validated clones from *S. aureus* strain COL cloned in *Escherichia coli* (*E. coli*) DH10B-T1 cells. 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.

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-19501 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: *E. coli*, strain DH10B-T1 clones should be grown at 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: *Staphylococcus aureus* (MRSA), Strain COL Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5, NR-19501."

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. Gill, S. R., et al. "Insights on Evolution of Virulence and Resistance from the Complete Genome Analysis of an Early Methicillin-Resistant *Staphylococcus aureus* Strain and a Biofilm-Producing Methicillin-Resistant *Staphylococcus epidermidis* Strain." J. Bacteriol. 187 (2005): 2426-2438. PubMed: 15774886.

Support Provided by NIAID

Table 1: *Staphylococcus aureus*, Strain COL Gateway® Clones, Plate 5 (ZSAJE)

Clone	Well Position	ORF Length	Locus ID	Description (Gene name)	Accession Number	Average Depth of Coverage
873	A01	340	SACOL0366	prophage L54a, terminase, small subunit, putative	YP_185258.1	3.232352941
877	A03	343	SACOL0323	hypothetical protein	YP_185215.1	3.227405248
879	A04	343	SACOL0355	conserved hypothetical protein	YP_185247.1	3.262390671
881	A05	343	SACOL0480	hypothetical protein	YP_185370.1	3.253644315
884	A06	343	SACOL0977	conserved hypothetical protein	YP_185845.1	3.253644315
886	A07	343	SACOL1438	conserved hypothetical protein	YP_186290.1	3.195335277
887	A08	343	SACOL1670	conserved hypothetical protein	YP_186510.1	3.221574344
889	A09	343	SACOL1702	ribosomal protein L21	YP_186541.1	3.21574344
891	A10	343	SACOL2240	ribosomal protein S10	YP_187050.1	3.27696793
893	A11	343	SACOL2503	hypothetical protein	YP_187298.1	3.247813411
895	A12	346	SACOL0038	conserved hypothetical protein	YP_184949.1	3.251445087
897	B01	346	SACOL1599	comG operon protein 3 precursor	YP_186439.1	3.23699422
899	B02	346	SACOL1794	thioredoxin, putative	YP_186627.1	3.208092486
901	B03	346	SACOL1796	conserved hypothetical protein	YP_186629.1	3.260115607
903	B04	346	SACOL1807	rhodanese-like domain protein	YP_186640.1	3.248554913
907	B05	349	SACOL0278	hypothetical protein	YP_185173.1	3.269340974
910	B06	349	SACOL0365	prophage L54a, HNH endonuclease family protein	YP_185257.1	3.134670487
911	B07	349	SACOL0489	conserved hypothetical protein	YP_185379.1	3.255014327
913	B08	349	SACOL0800	conserved hypothetical protein	YP_185674.1	3.220630372
916	B09	349	SACOL0920	hypothetical protein	YP_185791.1	3.243553009
917	B10	349	SACOL1155	thioredoxin	YP_186018.1	3.249283668
921	B11	349	SACOL1822	arsenical resistance operon repressor	YP_186654.1	2.630372493
923	B12	349	SACOL1930	conserved hypothetical protein	YP_186755.1	3.240687679
925	C01	349	SACOL2305	IS1272-related, transposase, degenerate	N/A	3.249283668
928	C02	349	SACOL2397	nitrite reductase [NAD(P)H], small subunit	YP_187200.1	3.209169054
932	C03	352	SACOL0335	hypothetical protein	YP_185227.1	3.235795455
933	C04	352	SACOL0521	conserved hypothetical protein TIGR00103	YP_185409.1	3.252840909
935	C05	352	SACOL1071	chitinase-related protein	YP_185935.1	3.230113636
939	C06	352	SACOL1499	conserved hypothetical protein	YP_186343.1	3.221590909
942	C07	352	SACOL2228	ribosomal protein L24	YP_187038.1	3.198863636
944	C08	352	SACOL2251	conserved hypothetical protein	YP_187059.1	3.224431818
945	C09	355	SACOL0804	conserved hypothetical protein	YP_185678.1	3.228169014
947	C10	355	SACOL0875	thioredoxin, putative	YP_185747.1	2.6
949	C11	355	SACOL0895	pathogenicity island protein	YP_185766.1	3.205633803
951	C12	355	SACOL1039	conserved hypothetical protein	YP_185904.1	3.18028169
953	D01	355	SACOL1585	conserved hypothetical protein	YP_186425.1	3.225352113
955	D02	355	SACOL1701	conserved hypothetical protein	YP_186540.1	3.21971831
957	D03	355	SACOL2137	transcriptional regulator CzrA	YP_186952.1	2.622535211
959	D04	358	SACOL0488	hypothetical protein	YP_185378.1	3.223463687
961	D05	358	SACOL0849	hypothetical protein	YP_185723.1	3.223463687
963	D06	358	SACOL0940	conserved hypothetical protein	YP_185810.1	3.248603352
966	D07	358	SACOL1146	conserved hypothetical protein	YP_186009.1	3.203910615

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Clone	Well Position	ORF Length	Locus ID	Description (Gene name)	Accession Number	Average Depth of Coverage
967	D08	361	SACOL0152	conserved hypothetical protein	YP_185052.1	3.1966759
969	D09	361	SACOL1971	hypothetical protein	YP_186795.1	3.229916898
971	D10	361	SACOL2056	anti-anti-sigma factor RsbV	YP_186872.1	2.631578947
973	D11	361	SACOL2288	conserved hypothetical protein	YP_187095.1	3.243767313
975	D12	361	SACOL2333	YnfA family protein	YP_187140.1	3.238227147
977	E01	361	SACOL2495	hypothetical protein	YP_187290.1	3.238227147
979	E02	364	SACOL0011	conserved hypothetical protein	YP_184922.1	2.637362637
981	E03	364	SACOL0525	conserved hypothetical protein	YP_185413.1	3.230769231
983	E04	364	SACOL1055	sspC protein	YP_185920.1	2.21978022
985	E05	364	SACOL1164	fibrinogen binding-related protein	YP_186027.1	2.623626374
987	E06	364	SACOL1603	conserved hypothetical protein TIGR00106	YP_186443.1	3.228021978
989	E07	364	SACOL2307	conserved hypothetical protein	YP_187114.1	3.197802198
993	E09	367	SACOL0395	glycine cleavage system H protein, putative	YP_185287.1	2.621253406
995	E10	367	SACOL0890	transcriptional regulator, Cro/CI family	YP_185761.1	3.182561308
997	E11	367	SACOL1252	conserved hypothetical protein	YP_186111.1	3.234332425
1000	E12	367	SACOL1482	hypothetical protein	YP_186327.1	3.166212534
1002	F01	370	SACOL2115	conserved hypothetical protein	YP_186930.1	3.186486486
1003	F02	373	SACOL2716	conserved hypothetical protein	YP_187502.1	2.608579088
1005	F03	376	SACOL0639	conserved hypothetical protein	YP_185524.1	2.627659574
1007	F04	376	SACOL0901	pathogenicity island protein	YP_185772.1	3.218085106
1009	F05	376	SACOL0905	pathogenicity island protein	YP_185776.1	3.220744681
1012	F06	376	SACOL0953	Na+/H+ antiporter, MnhC component	YP_185822.1	3.220744681
1013	F07	376	SACOL1347	hypothetical protein	YP_186200.1	3.228723404
1015	F08	376	SACOL1491	conserved hypothetical protein	YP_186335.1	3.175531915
1017	F09	376	SACOL1574	lipoprotein, putative	YP_186414.1	3.244680851
1019	F10	379	SACOL0208	hypothetical protein	YP_185107.1	3.224274406
1021	F11	379	SACOL0681	Na+/H+ antiporter, MnhC component, putative	YP_185564.1	3.224274406
1023	F12	379	SACOL1418	conserved hypothetical protein	YP_186270.1	3.234828496
1025	G01	379	SACOL1484	conserved hypothetical protein	YP_186329.1	3.226912929
1029	G02	379	SACOL1849	hypothetical protein	YP_186680.1	3.171503958
1031	G03	379	SACOL1902	conserved hypothetical protein	YP_186727.1	3.205804749
1033	G04	379	SACOL2550	conserved hypothetical protein	YP_187342.1	3.213720317
1035	G05	382	SACOL0354	conserved hypothetical protein TIGR01671	YP_185246.1	3.219895288
1037	G06	382	SACOL0497	conserved hypothetical protein	YP_185385.1	3.212041885
1039	G07	382	SACOL0528	conserved hypothetical protein	YP_185416.1	3.204188482
1041	G08	382	SACOL1009	conserved hypothetical protein	YP_185877.1	3.212041885
1043	G09	382	SACOL2287	staphylococcal accessory regulator R	YP_187094.1	3.196335079
1045	G10	382	SACOL2739	ribonuclease P protein component	YP_187525.1	3.206806283
1047	G11	385	SACOL0040	conserved hypothetical protein	YP_184951.1	3.21038961
1049	G12	385	SACOL0363	conserved hypothetical protein	YP_185255.1	3.207792208
1052	H01	385	SACOL0377	hypothetical protein	YP_185269.1	2.574025974
1055	H02	385	SACOL1257	ribosomal protein L19	YP_186116.1	3.218181818
1057	H03	385	SACOL1289	ribosome-binding factor A	YP_186146.1	3.207792208
1059	H04	385	SACOL1486	conserved hypothetical protein	YP_186331.1	2.612987013
1061	H05	385	SACOL2127	conserved hypothetical protein	YP_186942.1	3.158441558
1063	H06	385	SACOL2258	staphylococcal accessory regulator V	YP_187065.1	3.218181818
1065	H07	385	SACOL2729	integrase/recombinase, core domain family	YP_187515.1	3.205194805
1067	H08	388	SACOL1648	iojap-related protein	YP_186488.1	3.224226804
1069	H09	388	SACOL1833	crcB family protein	YP_186665.1	3.175257732
1071	H10	388	SACOL2102	conserved hypothetical protein	YP_186917.1	3.211340206
1073	H11	388	SACOL2234	ribosomal protein L22	YP_187044.1	2.167525773
1075	H12	388	SACOL2734	conserved hypothetical protein	YP_187520.1	2.953608247