Product Information Sheet for NR-19498

Staphylococcus aureus (MRSA), Strain COL Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2

Catalog No. NR-19498

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:

Every 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-19498 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 2, NR-19498."

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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its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

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 2 (ZSAJB)

Clone	Well Position	ORF Length	Locus ID	Description (Gene name)	Accession Number	Average Depth of Coverage
229	A01	160	SACOL2604	hypothetical protein	N/A	3
232	A02	163	SACOL0056	hypothetical protein	N/A	1.969325153
233	A03	163	SACOL0493	hypothetical protein	N/A	2
235	A04	163	SACOL1684	hypothetical protein	N/A	2
238	A05	163	SACOL2351	hypothetical protein	YP_187157.1	2
241	A06	166	SACOL1046	hypothetical protein	YP_185911.1	-
246	A07	166	SACOL1469	hypothetical protein	YP_186317.1	2
249	A08	166	SACOL2247	hypothetical protein	YP_187056.1	2.759036145
252	A09	166	SACOL2480	hypothetical protein	YP_187277.1	1.915662651
253	A10	169	SACOL0231	hypothetical protein	YP_185127.1	2
256	A11	169	SACOL0965	hypothetical protein	YP_185834.1	-
257	A12	169	SACOL1087	hypothetical protein	YP_185951.1	2
259	B01	169	SACOL1186	antibacterial protein (phenol soluble modulin)	YP_186048.1	3
261	B02	169	SACOL1187	antibacterial protein (phenol soluble modulin)	YP_186049.1	3
263	B03	169	SACOL1344	hypothetical protein	YP_186197.1	2
265	B04	169	SACOL1863	hypothetical protein	YP_186691.1	-
267	B05		SACOL2022	CLONE IS NOT AVAILABLE[1]	YP_186841.1	
269	B06	169	SACOL2558	hypothetical protein	N/A	2
271	B07	172	SACOL0471	hypothetical protein	YP_185361.1	1.843023256
273	B08	172	SACOL0919	hypothetical protein	YP_185790.1	-
275	B09	172	SACOL1343	hypothetical protein	N/A	-
277	B10	172	SACOL2076	conserved hypothetical protein	YP_186892.1	3
280	B11	172	SACOL2740	ribosomal protein L34	YP_187526.1	1.970930233
281	B12	175	SACOL0210	hypothetical protein	YP_185109.1	-
283	C01	175	SACOL1766	hypothetical protein	YP_186600.1	3
285	C02	175	SACOL2024	accessory gene regulator protein D	YP_186843.1	2
287	C03	175	SACOL2455	hypothetical protein	N/A	2
290	C04	175	SACOL2490	hypothetical protein	N/A	1.931428571
291	C05	178	SACOL0492	hypothetical protein	N/A	2
293	C06	178	SACOL1755	hypothetical protein	N/A	2
295	C07	178	SACOL1878	lantibiotic epidermin precursor EpiA	YP_186705.1	-
297	C08	178	SACOL2005	hypothetical protein	N/A	2
301	C09	178	SACOL2429	hypothetical protein	YP_187231.1	3
303	C10	181	SACOL0234	conserved hypothetical protein	YP_185130.1	2
307	C11	181	SACOL0850	hypothetical protein	YP_185724.1	2
309	C12	181	SACOL0867	hypothetical protein	N/A	2
311	D01	181	SACOL0893	pathogenicity island protein	YP_185764.1	3
313	D02	181	SACOL1174	hypothetical protein	YP_186037.1	3
315	D03	181	SACOL1679	conserved hypothetical protein	YP_186519.1	3
317	D04	181	SACOL1959	hypothetical protein	N/A	2
325	D06	187	SACOL0324	hypothetical protein	YP_185216.1	2
327	D07	187	SACOL0361	conserved hypothetical protein	YP_185253.1	3
329	D08	187	SACOL0465	hypothetical protein	YP_185355.1	2
331	D09	187	SACOL0909	hypothetical protein	YP_185780.1	3

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Clone	Well Position	ORF Length	Locus ID	Description (Gene name)	Accession Number	Average Depth of Coverage
333	D10	187	SACOL0934	conserved hypothetical protein	YP_185804.1	-
335	D11	187	SACOL1911	conserved hypothetical protein	YP_186736.1	2
337	D12	190	SACOL0532	hypothetical protein	YP_185420.1	3
339	E01	190	SACOL0795	hypothetical protein	YP_185668.1	2
345	E02	193	SACOL0378	hypothetical protein	YP_185270.1	2
347	E03	196	SACOL0334	conserved hypothetical protein	YP_185226.1	2
351	E04	196	SACOL1318	hypothetical protein	N/A	3
353	E05	196	SACOL1934	conserved hypothetical protein	YP_186759.1	2
357	E06	199	SACOL0386	conserved hypothetical protein TIGR01669	YP_185278.1	-
359	E07	199	SACOL1487	hypothetical protein	N/A	1.924623116
361	E08	199	SACOL2250	conserved hypothetical protein	YP_187058.1	2
363	E09	202	SACOL0029	HMG-CoA synthase, truncation	YP_184940.1	-
366	E10	202	SACOL0625	conserved hypothetical protein	YP_185510.1	1.975247525
367	E11	202	SACOL1119	conserved hypothetical protein	YP_185983.1	2
369	E12	202	SACOL1394	hypothetical protein	YP_186246.1	3
371	F01	202	SACOL2568	hypothetical protein	YP_187360.1	2
373	F02	205	SACOL2059	conserved hypothetical protein	YP_186875.1	2
375	F03	205	SACOL2259	hypothetical protein	YP_187066.1	2
377	F04	205	SACOL2457	hypothetical protein	YP_187255.1	2
379	F05	205	SACOL2542	conserved hypothetical protein	YP_187334.1	2
381	F06	208	SACOL0219	hypothetical protein	YP_185118.1	3
383	F07	208	SACOL0304	hypothetical protein	N/A	1.947115385
385	F08	208	SACOL0601	hypothetical protein	YP_185487.1	3
389	F09	208	SACOL1972	conserved hypothetical protein	YP_186796.1	3
391	F10	208	SACOL1983	hypothetical protein	YP_186807.1	2
393	F11	208	SACOL1987	conserved hypothetical protein	YP_186811.1	3
395	F12	211	SACOL1035	conserved domain protein	YP_185900.1	2
400	G01	211	SACOL1853	hypothetical protein	YP_186683.1	1.687203791
402	G02	211	SACOL1998	conserved hypothetical protein	YP_186822.1	1.976303318
403	G03	214	SACOL0258	hypothetical protein	YP_185153.1	3
407	G04	214	SACOL1556	hypothetical protein	YP_186397.1	3
409	G05	214	SACOL2221	ribosomal protein L30p/L7e	YP_187031.1	2
411	G06	217	SACOL0581	preprotein translocase, SecE subunit	YP_185467.1	3
413	G07	217	SACOL1680	conserved hypothetical protein	YP_186520.1	2
416	G08	220	SACOL0348	conserved hypothetical protein	YP_185240.1	-
417	G09	220	SACOL0986	hypothetical protein	YP_185854.1	2
419	G10	220	SACOL1171	hypothetical protein	YP_186034.1	2
421	G11	220	SACOL1335	hypothetical protein	YP_186189.1	2
425	G12	220	SACOL1852	hypothetical protein	N/A	3
427	H01	220	SACOL2226	ribosomal protein S14	YP_187036.1	-
429	H02	220	SACOL2311	hypothetical protein	YP_187118.1	3
432	H03	223	SACOL1185	hypothetical protein	YP_186047.1	2
435	H04	226	SACOL0331	hypothetical protein	YP_185223.1	2
437	H05	226	SACOL0436	conserved hypothetical protein	YP_185327.1	2
440	H06	226	SACOL1117	conserved hypothetical protein	YP_185981.1	-
441	H07	226	SACOL1348	conserved hypothetical protein	YP_186201.1	2
443	H08	226	SACOL2312	conserved hypothetical protein	YP_187119.1	3
445	H09	226	SACOL2491	conserved hypothetical protein	YP_187286.1	2
447	H10	226	SACOL2571	conserved hypothetical protein	YP_187363.1	2
449	H11	226	SACOL2726	hypothetical protein	YP_187512.1	2
451	H12	226	SACOL2730	hypothetical protein	YP_187516.1	3

[1]25 clones in the *Staphylococcus aureus* (MRSA), Strain COL Gateway® Clone Set (Plates 1-25), Recombinant in *Escherichia coli*, have been physically removed from the clone set due to international distribution limitations set by U.S. Department of Commerce restrictions (Commerce Control List).

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