

***Staphylococcus aureus* (MRSA), Strain COL Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 3**

**Catalog No. NR-19499**

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 cannot confirm or validate any clone not identified on the plate information table.

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 *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.

**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-19499 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 3, NR-19499."

**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](http://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.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at [www.beiresources.org](http://www.beiresources.org).

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

**Use Restrictions:**

**This material is distributed for internal research, non-commercial purposes only.** This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or

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.

Early Methicillin-Resistant *Staphylococcus aureus* Strain and a Biofilm-Producing Methicillin-Resistant *Staphylococcus epidermidis* Strain." *J. Bacteriol.* 187 (2005): 2426-2438. PubMed: 15774886.

**References:**

- Gill, S. R., et al. "Insights on Evolution of Virulence and Resistance from the Complete Genome Analysis of an

ATCC® is a trademark of the American Type Culture Collection.



**Table 1: *Staphylococcus aureus*, Strain COL Gateway® Clones, Plate 3 (ZSAJC)**

Clone	Well Position	ORF Length	Locus ID	Description (Gene name)	Accession Number	Average Depth of Coverage
453	A01	229	SACOL0206	hypothetical protein	YP_185105.1	2
455	A02	229	SACOL0359	hypothetical protein	YP_185251.1	3
457	A03	229	SACOL0912	conserved hypothetical protein	YP_185783.1	3
459	A04	229	SACOL1346	hypothetical protein	YP_186199.1	2
462	A05	229	SACOL1467	conserved hypothetical protein	YP_186315.1	2
463	A06	229	SACOL2466	hypothetical protein	YP_187264.1	3
465	A07	229	SACOL2513	hypothetical protein	YP_187307.1	3
467	A08	232	SACOL1175	hypothetical protein	YP_186038.1	2
469	A09	232	SACOL1331	hypothetical protein	YP_186185.1	2
471	A10	232	SACOL1350	conserved hypothetical protein	YP_186203.1	2
473	A11	232	SACOL2447	hypothetical protein	N/A	3
475	A12	235	SACOL0329	conserved hypothetical protein	YP_185221.1	3
477	B01	235	SACOL0362	conserved hypothetical protein	YP_185254.1	3
481	B02	235	SACOL0911	hypothetical protein	YP_185782.1	2
483	B03	235	SACOL1437	cold shock protein, CSD family	YP_186289.1	3
485	B04	235	SACOL1507	hypothetical protein	YP_186351.1	3
487	B05	235	SACOL1726	ribosomal protein L35	YP_186564.1	-
489	B06	235	SACOL2647	hypothetical protein	YP_187435.1	3
493	B07	238	SACOL0068	hypothetical protein	YP_184973.1	3
495	B08	238	SACOL0131	hypothetical protein	N/A	3
497	B09	238	SACOL0156	hypothetical protein	YP_185056.1	-
499	B10	238	SACOL0360	hypothetical protein	YP_185252.1	3
502	B11	238	SACOL0420	transcriptional regulator, Cro/Ci family	YP_185312.1	1.957983193
503	B12	238	SACOL0434	conserved hypothetical protein	YP_185325.1	3
505	C01	238	SACOL0677	conserved hypothetical protein	YP_185560.1	2
507	C02	238	SACOL1127	hypothetical protein	YP_185991.1	3
509	C03	238	SACOL1446	conserved hypothetical protein	YP_186298.1	2
511	C04	238	SACOL1605	conserved hypothetical protein	YP_186445.1	3
514	C05	238	SACOL2141	site-specific recombinase family protein, degenerate	N/A	1.983193277
515	C06	238	SACOL2547	hypothetical protein	YP_187339.1	2
518	C07	238	SACOL2586	hypothetical protein	N/A	1.983193277
520	C08	241	SACOL0352	hypothetical protein	YP_185244.1	1.98340249
521	C09	241	SACOL0358	conserved hypothetical protein	YP_185250.1	-
523	C10	241	SACOL1333	hypothetical protein	YP_186187.1	2
525	C11	241	SACOL1529	hypothetical protein	YP_186371.1	3
528	C12	241	SACOL1938	conserved hypothetical protein	YP_186763.1	1.98340249
529	D01	241	SACOL2573	copper ion binding protein	YP_187365.1	3
533	D02	244	SACOL2077	conserved hypothetical protein	YP_186893.1	2
535	D03	244	SACOL2231	ribosomal protein L29	YP_187041.1	-
537	D04	247	SACOL1218	conserved hypothetical protein	YP_186081.1	-
539	D05	247	SACOL2100	ATP synthase F0, C subunit	YP_186915.1	-
541	D06	247	SACOL2626	conserved hypothetical protein	YP_187415.1	3
543	D07	247	SACOL2695	hypothetical protein	YP_187481.1	3

## Product Information Sheet for NR-19499

Clone	Well Position	ORF Length	Locus ID	Description (Gene name)	Accession Number	Average Depth of Coverage
549	D08	250	SACOL1306	conserved hypothetical protein	YP_186163.1	2
551	D09	253	SACOL0285	conserved hypothetical protein	YP_185180.1	3
554	D10	253	SACOL0322	prophage L54a, Cro-related protein	YP_185214.1	1.806324111
555	D11	253	SACOL0862	hypothetical protein	YP_185735.1	-
557	D12	253	SACOL0903	pathogenicity island protein	YP_185774.1	-
559	E01	253	SACOL1033	hypothetical protein	YP_185898.1	-
561	E02	253	SACOL1099	conserved hypothetical protein	YP_185963.1	2
563	E03	253	SACOL1222	DNA-directed RNA polymerase, omega subunit	YP_186085.1	-
565	E04	253	SACOL1590	conserved hypothetical protein	YP_186430.1	2
567	E05	253	SACOL2217	translation initiation factor IF-1	YP_187027.1	2
569	E06	253	SACOL2556	conserved hypothetical protein	YP_187349.1	2
571	E07	256	SACOL0337	hypothetical protein	YP_185229.1	-
573	E08	256	SACOL0345	hypothetical protein	YP_185237.1	3
576	E09	256	SACOL0939	NifU domain protein	YP_185809.1	2
577	E10	256	SACOL1456	conserved hypothetical protein	YP_186307.1	-
579	E11	259	SACOL0326	hypothetical protein	YP_185218.1	2
581	E12	259	SACOL0676	conserved hypothetical protein	YP_185559.1	-
586	F01	259	SACOL1332	hypothetical protein	YP_186186.1	1.965250965
587	F02	259	SACOL1826	conserved hypothetical protein	YP_186658.1	-
589	F03	259	SACOL2033	conserved hypothetical protein	YP_186850.1	-
591	F04	262	SACOL0320	hypothetical protein	YP_185212.1	2
593	F05	262	SACOL1886	hypothetical protein	YP_186712.1	2
595	F06	262	SACOL2565	FeoA domain protein	YP_187357.1	2
599	F07	265	SACOL1567	exodeoxyribonuclease VII, small subunit	YP_186408.1	2
603	F08	265	SACOL2134	conserved hypothetical protein	YP_186949.1	2
605	F09	265	SACOL2589	conserved hypothetical protein	YP_187380.1	2
607	F10	268	SACOL0844	preprotein translocase, SecE subunit	YP_185718.1	2
609	F11	268	SACOL1093	conserved hypothetical protein	YP_185957.1	2
611	F12	268	SACOL1172	hypothetical protein	YP_186035.1	2
613	G01	268	SACOL1247	acyl carrier protein	YP_186107.1	2
615	G02	268	SACOL1324	RNA chaperone Hfq	YP_186179.1	2
617	G03	268	SACOL1375	conserved hypothetical protein	YP_186228.1	-
619	G04	268	SACOL2093	conserved hypothetical protein	YP_186908.1	2
621	G05	268	SACOL2263	molybdopterin converting factor, subunit 1	YP_187070.1	2
623	G06	271	SACOL0356	conserved hypothetical protein	YP_185248.1	-
625	G07	271	SACOL0822	conserved hypothetical protein	YP_185696.1	2
627	G08	271	SACOL0868	conserved hypothetical protein	YP_185740.1	-
631	G09	271	SACOL0942	conserved hypothetical protein	YP_185811.1	-
633	G10	274	SACOL0027	conserved hypothetical protein	YP_184938.1	-
637	G11	274	SACOL2174	conserved hypothetical protein	YP_186985.1	2
639	G12	277	SACOL0274	conserved hypothetical protein	YP_185169.1	2
641	H01	277	SACOL0351	conserved hypothetical protein	YP_185243.1	2
644	H02	277	SACOL0439	ribosomal protein S18	YP_185330.1	2
646	H03	277	SACOL1378	conserved hypothetical protein	YP_186231.1	1.642599278
647	H04	280	SACOL0003	conserved hypothetical protein	YP_184914.1	2
650	H05	280	SACOL0327	hypothetical protein	YP_185219.1	2
653	H06	283	SACOL0530	conserved hypothetical protein	YP_185418.1	2
657	H07	283	SACOL1340	hypothetical protein	YP_186194.1	2
659	H08	283	SACOL1525	ferredoxin	YP_186368.1	-
661	H09	283	SACOL1544	hypothetical protein	YP_186386.1	2
663	H10	286	SACOL0332	conserved hypothetical protein	YP_185224.1	2
665	H11	286	SACOL0446	conserved hypothetical protein	YP_185336.1	2
667	H12	286	SACOL1024	conserved hypothetical protein	YP_185890.1	2