

***Bacillus anthracis* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5**

Catalog No. NR-19729

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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 *Bacillus anthracis* (*B. anthracis*) Gateway® clone set consists of 58 plates which contain 5341 sequence validated clones from *B. anthracis*, strains Ames (5139 clones), Sterne (107 clones; contains plasmid pXO1 only) and A2012 (95 clones; contains plasmid pXO2 only) cloned in *Escherichia coli* (*E. coli*) DH10B-T1 cells. Each open reading frame was constructed in vector pDONR™221 (Invitrogen™) with an ATG start codon and no stop codon. The library was independently cloned and sequence verified by the [Harvard Institute of Proteomics](#). 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 a Harvard-modified *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.

Plate orientation and viability were confirmed for NR-19729.

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-19729 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 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Bacillus anthracis* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5, NR-19729."

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/bmb15/index.htm.

Disclaimers:

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References:

1. Read, T. D., et al. "The Genome Sequence of *Bacillus anthracis* Ames and Comparison to Closely Related Bacteria." *Nature* 423 (2003): 81-86. PubMed: 12721629.
2. Read, T. D., et al. "Comparative Genome Sequencing for Discovery of Novel Polymorphisms in *Bacillus anthracis*." *Science* 296 (2002): 2028-2033. PubMed: 12004073.

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Table 1: *Bacillus anthracis*, Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 5 (QMG002846)¹

Clone	Well Position	Locus ID	Description	Source	Accession Number	FLEX CloneID
51136	A02	BA0605	transcription antiterminator, LytR family	Chromosome (NC_003997)	NP_843137.1	245834
51318	A03	BA4815	peptidase, M42 family	Chromosome (NC_003997)	NP_847018.1	245842
51637	A04	BA0572	sensor histidine kinase	Chromosome (NC_003997)	NP_843106.1	245851
49592	A05	BA2449	hypothetical protein	Chromosome (NC_003997)	NP_844825.1	245861
49796	A06	BA4828	dephospho-CoA kinase	Chromosome (NC_003997)	NP_847031.1	245871
47636	A07	BA0152	hypothetical protein	Chromosome (NC_003997)	NP_842719.1	247745
50540	A08	BA0160	hypothetical protein	Chromosome (NC_003997)	NP_842726.1	247754
48251	A09	BA4403	exodeoxyribonuclease VII, small subunit	Chromosome (NC_003997)	NP_846631.1	247765
50877	A10	BA0168	hypothetical protein	Chromosome (NC_003997)	NP_842733.1	247776
51085	A11	BA4383	3-methyl-2-oxobutanoate dehydrogenase, beta subunit	Chromosome (NC_003997)	NP_846613.1	247786
49171	A12	BA4398	arginine repressor	Chromosome (NC_003997)	NP_846627.1	247796
50867	B01	BA2466	hypothetical protein	Chromosome (NC_003997)	NP_844842.1	245826
48479	B02	BA0612	transcriptional regulator, ArsR family	Chromosome (NC_003997)	NP_843143.1	245835
48897	B03	BA0607	glyoxylase family protein	Chromosome (NC_003997)	NP_843139.1	245843
49349	B04	BA4816	hypothetical protein	Chromosome (NC_003997)	NP_847019.1	245852
51817	B05	BA0614	proton/peptide symporter family protein	Chromosome (NC_003997)	NP_843145.1	245862
51954	B06	BA0596	nicotinate phosphoribosyltransferase, putative	Chromosome (NC_003997)	NP_843129.1	245872
50374	B07	BA0150	polysaccharide deacetylase, putative	Chromosome (NC_003997)	NP_842717.1	247746
47994	B08	BA0158	hypothetical protein	Chromosome (NC_003997)	NP_842724.1	247755
50772	B09	BA0140	ABC transporter, ATP-binding protein	Chromosome (NC_003997)	NP_842708.1	247766
50905	B10	BA4364	metallo-beta-lactamase family protein	Chromosome (NC_003997)	NP_846594.1	247778
48992	B11	BA4379	hypothetical protein	Chromosome (NC_003997)	NP_846609.1	247787
51393	B12	BA4368	peptidase T	Chromosome (NC_003997)	NP_846598.1	247797
48370	C01	BA2476	hypothetical protein	Chromosome (NC_003997)	NP_844852.1	245827
51141	C02	BA2469	threonine dehydratase, catabolic	Chromosome (NC_003997)	NP_844845.1	245836

Clone	Well Position	Locus ID	Description	Source	Accession Number	FLEX CloneID
51342	C03	BA2450	hypothetical protein	Chromosome (NC_003997)	NP_844826.1	245844
49383	C04	BA2477	hypothetical protein	Chromosome (NC_003997)	NP_844853.1	245854
49603	C05	BA2448	DNA-binding protein	Chromosome (NC_003997)	NP_844824.1	245863
49846	C06	BA4814	transcriptional regulator, TetR family	Chromosome (NC_003997)	NP_847017.1	245873
47693	C07	BA4370	hypothetical protein	Chromosome (NC_003997)	NP_846600.1	247747
50551	C08	BA0175	ABC transporter, substrate-binding protein, putative	Chromosome (NC_003997)	NP_842739.1	247756
50804	C09	BA4402	geranyltransferase	Chromosome (NC_003997)	NP_846630.1	247768
48907	C10	BA0136	ribosomal protein S11	Chromosome (NC_003997)	NP_842704.1	247779
51144	C11	BA4384	3-methyl-2-oxobutanoate dehydrogenase, alpha subunit	Chromosome (NC_003997)	NP_846614.1	247788
49340	C12	BA0169	RNA polymerase sigma-70 factor, ECF subfamily	Chromosome (NC_003997)	NP_842734.1	247798
50944	D01	BA4798	ribonuclease HIII	Chromosome (NC_003997)	NP_847001.1	245828
48554	D02	BA2452	hypothetical protein	Chromosome (NC_003997)	NP_844828.1	245837
48926	D03	BA4825	S-adenosylmethionine decarboxylase proenzyme	Chromosome (NC_003997)	NP_847028.1	245845
51714	D04	BA4838	isocitrate dehydrogenase, NADP-dependent	Chromosome (NC_003997)	NP_847041.1	245856
49624	D05	BA4819	translation initiation factor IF-3	Chromosome (NC_003997)	NP_847022.1	245865
49907	D06	BA4829	membrane protein, putative	Chromosome (NC_003997)	NP_847032.1	245875
50449	D07	BA4376	amino acid ABC transporter, amino acid-binding protein	Chromosome (NC_003997)	NP_846606.1	247748
48097	D08	BA4367	hypothetical protein	Chromosome (NC_003997)	NP_846597.1	247757
48292	D09	BA4371	hypothetical protein	Chromosome (NC_003997)	NP_846601.1	247769
50960	D10	BA0137	DNA-directed RNA polymerase, alpha subunit	Chromosome (NC_003997)	NP_842705.1	247780
49060	D11	BA4380	mutT/nudix family protein	Chromosome (NC_003997)	NP_846610.1	247789
51492	D12	BA4413	stage III sporulation protein AE	Chromosome (NC_003997)	NP_846641.1	247799
50952	E01	BA4822	primosomal protein Dnal	Chromosome (NC_003997)	NP_847025.1	245830
51215	E02	BA4827	glyceraldehyde 3-phosphate dehydrogenase	Chromosome (NC_003997)	NP_847030.1	245838
51503	E03	BA0606	nucleoside transporter, NupC family	Chromosome (NC_003997)	NP_843138.1	245847
49532	E04	BA4796	cvpA family protein	Chromosome (NC_003997)	NP_846999.1	245857
49652	E05	BA2467	membrane protein, putative	Chromosome (NC_003997)	NP_844843.1	245867
49915	E06	BA2479	transcriptional regulator, TetR family	Chromosome (NC_003997)	NP_844854.1	245877
47696	E07	BA0134	ribosomal protein L36	Chromosome (NC_003997)	NP_842702.1	247749
50576	E08	BA0155	conserved hypothetical protein TIGR00159	Chromosome (NC_003997)	NP_842721.1	247758
48340	E09	BA4365	hypothetical protein	Chromosome (NC_003997)	NP_846595.1	247771
48925	E10	BA4407	hypothetical protein	Chromosome (NC_003997)	NP_846635.1	247781
51282	E11	BA0147	mrp protein	Chromosome (NC_003997)	NP_842714.1	247791
49355	E12	BA4409	acetyl-CoA carboxylase, biotin carboxyl carrier protein	Chromosome (NC_003997)	NP_846637.1	247800
48412	F01	BA4797	hypothetical protein	Chromosome (NC_003997)	NP_847000.1	245831
48774	F02	BA4817	ribosomal protein L20	Chromosome (NC_003997)	NP_847020.1	245839
49272	F03	BA4836	maoC like domain protein	Chromosome (NC_003997)	NP_847039.1	245848
51747	F04	BA2453	hypothetical protein	Chromosome (NC_003997)	NP_844829.1	245858

Clone	Well Position	Locus ID	Description	Source	Accession Number	FLEX CloneID
51890	F05	BA0593	amino acid permease family protein	Chromosome (NC_003997)	NP_843126.1	245868
49979	F06	BA4813	hypothetical protein	Chromosome (NC_003997)	NP_847016.1	245879
50502	F07	BA4394	stage 0 sporulation protein A	Chromosome (NC_003997)	NP_846624.1	247750
48188	F08	BA0151	hypothetical protein	Chromosome (NC_003997)	NP_842718.1	247761
50831	F09	BA4388	phosphate butyryltransferase	Chromosome (NC_003997)	NP_846618.1	247772
51015	F10	BA0170	hypothetical protein	Chromosome (NC_003997)	NP_842735.1	247782
49097	F11	BA4378	hypothetical protein	Chromosome (NC_003997)	NP_846608.1	247792
49370	F12	BA0183	lipoprotein, putative	Chromosome (NC_003997)	NP_842746.1	247802
50953	G01	BA4837	malate dehydrogenase	Chromosome (NC_003997)	NP_847040.1	245832
51314	G02	BA0608	CBS domain protein	Chromosome (NC_003997)	NP_843140.1	245840
51632	G03	BA2480	ABC transporter, permease protein, putative	Chromosome (NC_003997)	NP_844855.1	245849
49564	G04	BA0600	membrane protein, putative	Chromosome (NC_003997)	NP_843133.1	245859
49724	G05	BA2447	transporter, LysE family	Chromosome (NC_003997)	NP_844823.1	245869
50166	G06	BA0577	response regulator	Chromosome (NC_003997)	NP_843111.2	245883
47834	G07	BA4392	hypothetical protein	Chromosome (NC_003997)	NP_846622.1	247751
48187	G08	BA0133	translation initiation factor IF-1	Chromosome (NC_003997)	NP_842701.1	247763
48701	G09	BA0171	lipoprotein, putative	Chromosome (NC_003997)	NP_842736.1	247773
51044	G10	BA4373	hypothetical protein	Chromosome (NC_003997)	NP_846603.1	247784
49103	G11	BA0143	ribosomal protein L13	Chromosome (NC_003997)	NP_842710.1	247794
49390	G12	BA0167	hypothetical protein	Chromosome (NC_003997)	NP_842732.1	247804
48415	H01	BA0603	hypothetical protein	Chromosome (NC_003997)	NP_843135.1	245833
48862	H02	BA0594	transcriptional regulator, ArsR family	Chromosome (NC_003997)	NP_843127.1	245841
49310	H03	BA2487	transcriptional regulator, MarR family	Chromosome (NC_003997)	NP_844862.1	245850
51809	H04	BA2475	ATP-dependent RNA helicase, DEAD/DEAH box family	Chromosome (NC_003997)	NP_844851.1	245860
51921	H05	BA0609	aspartate ammonia-lyase	Chromosome (NC_003997)	NP_843141.1	245870
50106	H06	BA2472	metallo-beta-lactamase family protein	Chromosome (NC_003997)	NP_844848.1	245885
47875	H07	BA4362	hypothetical protein	Chromosome (NC_003997)	NP_846593.1	247753
50706	H08	BA4405	methylenetetrahydrofolate dehydrogenase/methenyltetrahydrofolate	Chromosome (NC_003997)	NP_846633.1	247764
50859	H09	BA0176	alcohol dehydrogenase, zinc-containing	Chromosome (NC_003997)	NP_842740.1	247774
48920	H10	BA0144	ribosomal protein S9	Chromosome (NC_003997)	NP_842711.1	247785
51354	H11	BA4386	butyrate kinase	Chromosome (NC_003997)	NP_846616.1	247795

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