

***Mycobacterium tuberculosis* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 40**

Catalog No. NR-19676

This reagent is the tangible property of the U.S. Government.

For research use only. Not for use in humans.

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 *Mycobacterium tuberculosis* (*M. tuberculosis*) Gateway® clone set consists of 42 plates which contain 3724 sequence validated clones [3294 *M. tuberculosis*, strain H37Rv clones supplemented with 430 unique open reading frames (ORF) from *M. tuberculosis*, strain CDC1551] cloned in *Escherichia coli* (*E. coli*) DH10B-T1 cells. Each ORF was recombined in vector pDONR™221 with an ATG start codon and no stop codon. The sequence was validated by full-length sequencing of each entry 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.

Plate orientation and viability were confirmed for NR-19676.

Material Provided:

Each inoculated well of the 96-well plate contains approximately 60 µL of culture in Luria Bertani (LB) broth containing 50 µg/mL kanamycin supplemented with 15% glycerol.

Packaging/Storage:

NR-19676 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: 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 1 day.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Mycobacterium tuberculosis* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 40, NR-19676."

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 \(BMBL\)](#), 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:

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References:

1. Cole, S. T., et al. "Deciphering the Biology of *Mycobacterium tuberculosis* from the Complete Genome Sequence." *Nature* 393 (1998): 537-544. PubMed: 9634230.

2. Camus, J. C., et al. "Re-Annotation of the Genome Sequence of *Mycobacterium tuberculosis* H37Rv." *Microbiology* 148 (2002): 2967-2973. PubMed: 12368430.

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Table 1: *Mycobacterium tuberculosis* Gateway® Clones, Plate 40 (ZMTMD)¹

Clone	Well Position	ORF Length	Locus ID	Description	Accession Number	Average Depth of Coverage
11825	A01	133	MT3223	hypothetical protein MT3223	NP_337749.1	-
11965	A02	133	MT2326	hypothetical protein MT2326	NP_336794.1	-
11925	A03	136	MT3156	hypothetical protein MT3156	NP_337678.1	-
11991	A05	142	MT0603	hypothetical protein MT0603	NP_335012.1	-
11916	A06	145	MT3536	hypothetical protein MT3536	NP_338062.1	2
11821	A07	145	MT0506	hypothetical protein MT0506	NP_334915.1	-
11951	A08	145	MT3174.1	hypothetical protein MT3174.1	NP_337697.1	-
11843	A10	145	MT0294	hypothetical protein MT0294	NP_334704.1	-
11873	A11	145	MT3436	hypothetical protein MT3436	NP_337965.1	-
11909	A12	148	MT2424	hypothetical protein MT2424	NP_336904.1	-
11927	B01	148	MT3847	hypothetical protein MT3847	NP_338397.1	-
11969	B02	151	MT0416	hypothetical protein MT0416	NP_334826.1	-
11869	B03	151	MT2417	hypothetical protein MT2417	NP_336896.1	-
11826	B04	154	MT0540	hypothetical protein MT0540	NP_334949.1	2
11819	B05	154	MT2375	hypothetical protein MT2375	NP_336854.1	-
11816	B06	154	MT2895	hypothetical protein MT2895	NP_337406.1	2
11853	B07	154	MT2083	hypothetical protein MT2083	NP_336548.1	-
12003	B08	154	MT3846	hypothetical protein MT3846	NP_338396.1	-
11905	B09	157	MT1771.1	hypothetical protein MT1771.1	NP_336230.1	-
11976	B10	157	MT0868	hypothetical protein MT0868	NP_335297.1	1.955414013
11985	B11	160	MT2092	hypothetical protein MT2092	NP_336557.1	-
11814	B12	160	MT2115	hypothetical protein MT2115	NP_336580.1	2
11829	C01	160	MT3290.2	hypothetical protein MT3290.2	NP_337819.1	-
11899	C02	160	MT3767.3	hypothetical protein MT3767.3	NP_338320.1	-
11903	C03	160	MT3580.2	hypothetical protein MT3580.2	NP_338125.1	-
11839	C04	163	MT0116.1	hypothetical protein MT0116.1	NP_334525.1	-
11955	C05	163	MT2369	hypothetical protein MT2369	NP_336845.1	-
11913	C06	166	MT3628	hypothetical protein MT3628	NP_338175.1	-
11963	C07	166	MT2168	hypothetical protein MT2168	NP_336637.1	-
11837	C08	166	MT3994	hypothetical protein MT3994	NP_338548.1	-
11961	C09	166	MT3491.1	hypothetical protein MT3491.1	NP_338013.1	-
11941	C10	166	MT2510	hypothetical protein MT2510	NP_336993.1	-
11895	C11	169	MT2325	hypothetical protein MT2325	NP_336793.1	-
11915	C12	169	MT0740.1	hypothetical protein MT0740.1	NP_335158.1	-
11901	D01	169	MT3876.1	hypothetical protein MT3876.1	NP_338427.1	-
12001	D02	169	MT1578.1	hypothetical protein MT1578.1	NP_336031.1	-
11953	D03	172	MT3362	hypothetical protein MT3362	NP_337889.1	-
11882	D04	172	MT0573.1	hypothetical protein MT0573.1	NP_334982.1	1.947674419
11823	D05	175	MT0773.1	hypothetical protein MT0773.1	NP_335200.1	-
11849	D06	175	MT1070	hypothetical protein MT1070	NP_335507.1	-
11939	D07	175	MT0492	hypothetical protein MT0492	NP_334901.1	-
11855	D08	178	MT3972.1	hypothetical protein MT3972.1	NP_338526.1	-

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Clone	Well Position	ORF Length	Locus ID	Description	Accession Number	Average Depth of Coverage
11920	D09	178	MT0991	hypothetical protein MT0991	NP_335425.1	2
11993	D10	178	MT1098	hypothetical protein MT1098	NP_335540.1	-
11929	D11	178	MT1556.1	hypothetical protein MT1556.1	NP_336009.1	2
11889	D12	181	MT2960	hypothetical protein MT2960	NP_337472.1	-
11831	E01	181	MT0031	hypothetical protein MT0031	NP_334440.1	-
11983	E02	184	MT1414.1	hypothetical protein MT1414	NP_335863.1	-
11865	E03	184	MT1321	hypothetical protein MT1321	NP_335768.1	-
11897	E04	184	MT3919	hypothetical protein MT3919	NP_338471.1	2
11871	E05	184	MT0946	hypothetical protein MT0946	NP_335379.1	-
11919	E06	184	MT0910.4	hypothetical protein MT0910.4	NP_335342.1	-
11959	E07	187	MT0910.3	hypothetical protein MT0910.3	NP_335341.1	-
11890	E08	187	MT1122.1	hypothetical protein MT1122.1	NP_335566.1	1.679144385
11944	E09	187	MT2138.1	hypothetical protein MT2138.1	NP_336605.1	2.85026738
11986	E10	187	MT3953	hypothetical protein MT3953	NP_338506.1	1.743315508
11863	E11	187	MT1356	hypothetical protein MT1356	NP_335804.1	-
11846	E12	190	MT1813	hypothetical protein MT1813	NP_336270.1	1.994736842
11877	F01	190	MT1077	hypothetical protein MT1077	NP_335515.1	-
12079	F02	190	MT0431	hypothetical protein MT0431	NP_334841.1	2
12058	F03	190	MT2554	hypothetical protein MT2554	NP_337042.1	2
12026	F04	190	MT1288	hypothetical protein MT1288	NP_335732.1	2
12117	F05	193	MT0576	hypothetical protein MT0576	NP_334985.1	2
12032	F06	193	MT1178	hypothetical protein MT1178	NP_335623.1	2
12067	F07	193	MT0910.1	hypothetical protein MT0910.1	NP_335339.1	-
12094	F08	196	MT1497.2	hypothetical protein MT1497.2	NP_335947.1	1.964285714
12185	F09	199	MT0196	hypothetical protein MT0196	NP_334602.1	-
12167	F10	199	MT3780	hypothetical protein MT3780	NP_338333.1	2
12129	F11	199	MT0069	hypothetical protein MT0069	NP_334479.1	-
12187	F12	199	MT3275.1	hypothetical protein MT3275.1	NP_337802.1	2
12031	G01	199	MT0553	hypothetical protein MT0553	NP_334962.1	-
12011	G02	202	MT2467	hypothetical protein MT2467	NP_336948.1	2
12072	G03	202	MT1746.1	hypothetical protein MT1746.1	NP_336202.1	2
12015	G04	202	MT2370.2	hypothetical protein MT2370.2	NP_336848.1	-
12119	G05	205	MT1585.1	hypothetical protein MT1585.1	NP_336038.1	2
12155	G06	205	MT0600	hypothetical protein MT0600	NP_335009.1	2
12056	G07	205	MT2370	hypothetical protein MT2370	NP_336846.1	2
12052	G08	205	MT0663	50S ribosomal protein L33	NP_335074.1	2
12170	G09	208	MT0853	hypothetical protein MT0853	NP_335280.1	2
12077	G10	208	MT3671.2	hypothetical protein MT3671.2	NP_338216.1	-
12115	G11	208	MT2396	hypothetical protein MT2396	NP_336874.1	-
12121	G12	208	MT3412	hypothetical protein MT3412	NP_337941.1	-
12087	H01	208	MT3014	hypothetical protein MT3014	NP_337527.1	-
12163	H02	211	MT0638.1	hypothetical protein MT0638.1	NP_335047.1	-
12180	H03	211	MT0290	hypothetical protein MT0290	NP_334696.1	2
12152	H04	211	MT1266	hypothetical protein MT1266	NP_335710.1	2
12005	H05	214	MT1054.1	hypothetical protein MT1054.1	NP_335492.1	-
12195	H06	214	MT3103	hypothetical protein MT3103	NP_337618.1	-
12183	H07	217	MT3959	hypothetical protein MT3959	NP_338512.1	-
12176	H08	217	MT3268	hypothetical protein MT3268	NP_337793.1	2
12149	H09	220	MT3149.1	hypothetical protein MT3149.1	NP_337669.1	-
12061	H10	220	MT2365.2	hypothetical protein MT2365.2	NP_336840.1	-
12045	H11	220	MT1121	hypothetical protein MT1121	NP_335564.1	2
12125	H12	223	MT2588	hypothetical protein MT2588	NP_337079.1	2

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