

***Rickettsia prowazekii* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2**

Catalog No. NR-19450

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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 *Rickettsia prowazekii* (*R. prowazekii*) Gateway® clone set consists of approximately 748 sequence validated clones from *R. prowazekii*, strain Madrid E 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 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.

Plate orientation and viability were confirmed for NR-19450.

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-19450 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 24 hours.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: *Rickettsia prowazekii* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2, NR-19450.”

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:

- Andersson, S. G., et al. "The Genome Sequence of *Rickettsia prowazekii* and the Origin of Mitochondria." *Nature* 396 (1998): 133-140. PubMed: 9823893.

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Table 1: *Rickettsia prowazekii* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2 (ZRPAB)¹

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
44610	A01	RP164	hypothetical protein RP164	160	NP_220554.1	2
44811	A02	RP456	50S ribosomal protein L36	160	NP_220836.1	2
44949	A03	RP352	hypothetical protein RP352	166	NP_220736.1	1.668674699
44580	A04	RP610	50S ribosomal protein L34	169	NP_220978.1	2
44779	A05	RP080	hypothetical protein RP080	187	NP_220473.1	1.721925134
44731	A06	RP749	twin arginine translocase protein A	199	NP_221101.1	-
44643	A07	RP279	hypothetical protein RP279	202	NP_220663.1	-
44696	A08	RP331	hypothetical protein RP331	202	NP_220714.1	2.415841584
44896	A09	RP879	50S ribosomal protein L33	205	NP_221225.1	2
44592	A10	RP088	hypothetical protein RP088	214	NP_220481.1	2.317757009
44747	A11	RP288	hypothetical protein RP288	214	NP_220672.1	2
44655	A12	RP787	tellurium resistance protein TERC (terC)	217	NP_221137.1	2.658986175
44799	B01	RP641	50S ribosomal protein L30	226	NP_221005.1	2
44707	B02	RP488	hypothetical protein RP488	229	NP_220865.1	1.851528384
44784	B03	RP773	50S ribosomal protein L32	232	NP_221124.1	1.689655172
44763	B04	RP134	preprotein translocase subunit SecE	235	NP_220525.1	1.668085106
44752	B05	RP615	30S ribosomal protein S21	235	NP_220982.1	2.289361702
44903	B06	RP158	hypothetical protein RP158	238	NP_220549.1	2.970588235
44936	B07	RP207	hypothetical protein RP207	238	NP_220595.1	1.648305085
44712	B08	RP608	50S ribosomal protein L35	238	NP_220976.1	3.302521008
44786	B09	RP244	hypothetical protein RP244	241	NP_220629.1	1.975103734
44700	B10	RP543	hypothetical protein RP543	247	NP_220916.1	2.295546559
44772	B11	RP670	cold shock-like protein (cspA)	247	NP_221032.1	2.271255061
44603	B12	RP651	50S ribosomal protein L29	250	NP_221015.1	2
44851	C01	RP814	translation initiation factor IF-1	250	NP_221163.1	1.976
44766	C02	RP022	F0F1 ATP synthase subunit C	259	NP_220416.1	2
44900	C03	RP757	hypothetical protein RP757	259	NP_221109.1	2.243243243
44842	C04	RP650	30S ribosomal protein S17	268	NP_221014.1	1.634328358
44676	C05	RP812	hypothetical protein RP812	268	NP_221162.1	3.294776119
44846	C06	RP100	50S ribosomal protein L31	271	NP_220493.1	2
44662	C07	RP113	hypothetical protein RP113	271	NP_220505.1	3.638376384
44825	C08	RP167	hypothetical protein RP167	271	NP_220557.1	3.258302583
44861	C09	RP245	morphology/transcription regulator BoIA family protein	277	NP_220630.1	2.63898917
44586	C10	RP350	exodeoxyribonuclease VII small subunit	277	NP_220733.1	2.967509025
44621	C11	RP524	hypothetical protein RP524	277	NP_220897.1	3.281588448
44638	C12	RP024	hypothetical protein RP024	283	NP_220418.1	-
44758	D01	RP409	hypothetical protein RP409	283	NP_220790.1	1.869257951

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
44682	D02	RP697	hypothetical protein RP697	283	NP_221057.1	2.25795053
44792	D03	RP098	hypothetical protein RP098	286	NP_220491.1	2.300699301
44650	D04	RP362	hypothetical protein RP362	286	NP_220745.1	2.265734266
44729	D05	RP061	hypothetical protein RP061	289	NP_220455.1	3.266435986
44922	D06	RP752	50S ribosomal protein L27	295	NP_221104.1	1.644067797
44625	D07	RP763	acyl carrier protein	295	CAA15191.1	2.633898305
44692	D08	RP599	hypothetical protein RP599	298	NP_220967.1	2.275167785
44830	D09	RP169	hypothetical protein RP169	307	NP_220559.1	1.882736156
44718	D10	RP215	hypothetical protein RP215	307	NP_220601.1	1.651465798
44878	D11	RP550	hypothetical protein RP550	307	NP_220922.1	2
44887	D12	RP633	30S ribosomal protein S20	307	NP_220997.1	2
44754	E01	RP503	30S ribosomal protein S15	310	NP_220879.1	2
44606	E02	RP766	hypothetical protein RP766	313	NP_221118.1	2
44601	E03	RP723	hypothetical protein RP723	319	NP_221078.1	2.611285266
44574	E04	RP040	30S ribosomal protein S18	322	NP_220434.1	1.99689441
44806	E05	RP204	glutaredoxin 3 (grxC1)	322	NP_220592.1	1.639751553
44736	E06	RP708	integration host factor alpha-subunit (himA)	322	NP_221067.1	3.152173913
44928	E07	RP679	hypothetical protein RP679	325	NP_221040.1	3.230769231
44872	E08	RP099	50S ribosomal protein L28	328	NP_220492.1	2.240853659
44883	E09	RP657	50S ribosomal protein L23	331	NP_221021.1	3.966767372
44702	E10	RP709	hypothetical protein RP709	331	NP_221068.1	1.987915408
44932	E11	RP079	preprotein translocase subunit SecE	337	NP_220472.1	3.237388724
44919	E12	RP153	aspartyl/glutamyl-tRNA amidotransferase subunit C	337	NP_220544.1	2
44892	F01	RP725	hypothetical protein RP725	337	NP_221080.1	3.222551929
44724	F02	RP646	30S ribosomal protein S14	340	NP_221010.1	2.211764706
44854	F03	RP156	putative monovalent cation/H ⁺ antiporter subunit E	346	NP_220547.1	3.069364162
44816	F04	RP660	30S ribosomal protein S10	352	NP_221024.1	4.199430199
44864	F05	RP751	50S ribosomal protein L21	352	NP_221103.1	3.213068182
44916	F06	RP756	hypothetical protein RP756	352	NP_221108.1	3.184659091
44876	F07	RP839	hypothetical protein RP839	352	NP_221187.1	2.599431818
44942	F08	RP266	putative monovalent cation/H ⁺ antiporter subunit G	355	NP_220651.1	2.081690141
44570	F09	RP547	hypothetical protein RP547	355	NP_220920.1	3.101408451
44802	F10	RP240	hypothetical protein RP240	358	NP_220625.1	2.938547486
44838	F11	RP423	hypothetical protein RP423	358	NP_220804.1	2
44826	F12	RP714	ankyrin, BRAIN variant 2 (ank2)	358	NP_221071.1	2.391061453
44950	G01	RP745	glutaredoxin-like protein GRLA (grxC2)	358	NP_221097.1	1.988826816
44940	G02	RP866	hypothetical protein RP866	358	NP_221214.1	3.162011173
44818	G03	RP811	hypothetical protein RP811	361	NP_221161.1	2.603878116
44594	G04	RP826	hypothetical protein RP826	361	NP_221175.1	2.59833795
44776	G05	RP829	ferredoxin (fdxA)	364	NP_221178.1	3.225274725
44714	G06	RP063	HESB protein (hesB1)	367	NP_220457.1	1.596730245
44582	G07	RP171	DNA-binding protein HU (hupA)	367	NP_220561.1	2.179836512
44632	G08	RP484	HESB protein (hesB2)	367	NP_220861.1	2.217983651
44658	G09	RP532	hypothetical protein RP532	367	NP_220905.1	1.970027248
44670	G10	RP791	NADH dehydrogenase subunit K	367	CAA15217.1	-
44614	G11	RP878	30S ribosomal protein S16	370	NP_221224.1	1.9
44647	G12	RP800	F0F1 ATP synthase subunit epsilon	373	NP_221150.1	2.509383378
44738	H01	RP648	50S ribosomal protein L24	376	NP_221012.1	1.949468085

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
44666	H02	RP548		382	CAA14997.1	2
44634	H03	RP318	hypothetical protein RP318	385	NP_220701.1	3.124675325
44906	H04	RP554	hypothetical protein RP554	388	NP_220926.1	2.103092784
44866	H05	RP609	50S ribosomal protein L20	388	NP_220977.1	1.824742268
44742	H06	RP222	hypothetical protein RP222	391	NP_220608.1	3.166240409
44834	H07	RP643	50S ribosomal protein L18	391	NP_221007.1	3
44628	H08	RP798	hypothetical protein RP798	391	NP_221148.1	3.191815857
44688	H09	RP654	30S ribosomal protein S19	394	NP_221018.1	3.200507614
44680	H10	RP317	protein kinase C inhibitor 1 (pkci)	397	NP_220700.1	2.173803526
44910	H11	RP039	30S ribosomal protein S6	400	NP_220433.1	2
45066	H12	RP388	hypothetical protein RP388	400	NP_220769.1	2

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