Rickettsia prowazekii Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 1

Catalog No. NR-19449

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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:

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 *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.

Plate orientation and viability were confirmed for NR-19449.

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-19449 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 1, NR-19449."

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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References:

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

Support Provided by NIAID

Table 1: *Rickettsia prowazekii* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 1 (ZRPAA)[1]

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
44236	A01	RP052	hypothetical protein RP052	310	NP_220446.1	2.609677
44528	A02	RP627	co-chaperonin GroES	322	NP_220992.1	2
44319	A03	RP323	frataxin-like protein	349	NP_220706.1	2.948424
44455	A04	RP199	adrenodoxin	373	NP_220587.1	2.160858
44552	A05	RP585	preprotein translocase subunit YajC	463	NP_220954.1	2.930886
44403	A06	RP589	inorganic pyrophosphatase	553	NP_220958.1	2.625678
44491	A07	RP875	hypothetical protein RP875	559	NP_221222.1	2.613596
44327	A08	RP804	F0F1 ATP synthase subunit delta	586	NP_221154.1	2.414676
44515	A09	RP531	translation initiation factor IF-3	592	NP_220904.1	4.165541
44476	A10	RP731	dephospho-CoA kinase	610	NP_221084.1	3.44918
44299	A11	RP876	lipoate-protein ligase B	664	NP_221223.1	2.929217
44375	A12	RP746	endonuclease III (nth)	673	NP_221098.1	3.748886
44440	B01	RP438	recombination protein RecR	715	NP_220819.1	2.685315
44361	B02	RP147	hypothetical protein RP147	745	NP_220538.1	3.688591
44387	B03	RP071	transcriptional activator protein CZCR (czcR)	748	NP_220465.1	2.358289
44195	B04	RP137	50S ribosomal protein L1	751	NP_220528.1	3.030626
44244	B05	RP379	3-deoxy-manno-octulosonate cytidylyltransferase	775	NP_220762.1	4.183226
44251	B06	RP369	ABC transporter ATP-binding protein	778	NP_220752.1	2.546272
44344	B07	RP555	hemolysin (tlyA)	790	NP_220927.1	4.158228
44467	B08	RP058	SOJ protein (soj)	802	NP_220452.1	3.275561
44216	B09	RP431	hypothetical protein RP431	835	NP_220812.1	3.45988
44227	B10	RP689	hypothetical protein RP689	835	NP_221050.1	3.759281
44452	B11	RP464	hypothetical protein RP464	892	NP_220844.1	3.689462
44394	B12	RP802	F0F1 ATP synthase subunit gamma	901	NP_221152.1	4.048835
44334	C01	RP718	lipid A biosynthesis lauroyl acyltransferase	907	NP_221073.1	3.871003
44544	C02	RP688	hypothetical protein RP688	928	NP_221049.1	3.883621
44412	C03	RP775	cell division protein FTSY (ftsY)	946	NP_221126.1	3.752643
44427	C04	RP398	protease SohB	961	NP_220779.1	2.947971
44431	C05	RP087	elongation factor Ts	964	NP_220480.1	1.981328
44463	C06	RP189	DNA polymerase III subunit delta	1000	NP_220578.1	2.699
44348	C07	RP843	GTPase ObgE	1030	NP_221191.1	3.720388
44282	C08	RP341	hypothetical protein RP341	1060	NP_220724.1	4.913208
44256	C09	RP768	rod shape-determining protein MreB	1075	NP_221120.1	4.899535
44341	C10	RP884	ferrochelatase	1075	NP_221230.1	4.802791

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Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
44532	C11	RP120	hypothetical protein RP120	1099	NP_220512.1	4.684258
44226	C12	RP354	NADH dehydrogenase subunit D	1204	NP_220738.1	4.580565
44242	D01	RP251	cell division protein FTSA (ftsA)	1270	NP_220636.1	4.645669
44547	D02	RP692	ATP-dependent protease ATP-binding subunit ClpX	1312	NP_221053.1	3.67378
44272	D03	RP042	cell cycle protein MESJ (mesJ)	1327	NP_220436.1	4.523738
44396	D04	RP410	UDP-N-acetylmuramoyl-L-alanyl-D-glutamate synthetase	1372	NP_220791.1	3.951166
44448	D05	RP677	GTP-binding protein EngA	1378	NP_221038.1	4.434688
44324	D06	RP320	ATP-dependent protease ATP-binding subunit HslU	1387	NP_220703.1	4.55876
44212	D07	RP460	dihydrolipoamide dehydrogenase	1396	NP_220840.1	3.530086
44231	D08	RP224	outer membrane protein TOLC precursor (tolC)	1405	NP_220610.1	1.233452
44480	D09	RP583	magnesium transporter (mgtE)	1405	NP_220953.1	4.467616
44382	D10	RP085	cysteinyl-tRNA synthetase	1408	NP_220478.1	4.193182
44417	D11	RP537	NADH dehydrogenase subunit N	1411	NP_220910.1	3.696669
44201	D12	RP601	chromosomal replication initiation protein	1426	NP_220969.1	4.431978
44374	E01	RP801	F0F1 ATP synthase subunit beta	1459	NP_221151.1	4.197395
44541	E02	RP562	nitrogen assimilation regulatory protein NTRX (ntrX)	1462	NP_220934.1	4.157319
44487	E03	RP377	ADP,ATP carrier protein	1558	NP_220760.1	3.075096
44535	E04	RP124	periplasmic serine protease DO-like precursor	1576	NP_220516.1	3.149746
44193	E05	RP538	hypothetical protein RP538	1576	NP_220911.1	3.177665
44426	E06	RP083	hypothetical protein RP083	1600	NP_220476.1	5.083125
44265	E07	RP822	hypothetical protein RP822	1621	NP_221171.1	4.727946
44356	E08	RP626	chaperonin GroEL	1687	NP_220991.1	4.72377
44436	E09	RP060	putative ABC transporter ATP-binding protein	1702	NP_220454.1	4.334313
44421	E10	RP521	30S ribosomal protein S1	1741	NP_220895.1	4.620908
44311	E11	RP696	transport ATP-binding protein MsbA	1765	NP_221056.1	1.988669
44309	E12	RP820	poly-BETA-hydroxybutyrate polymerase (phbC2)	1789	NP_221169.1	4.240917
44352	F01	RP200	chaperone protein HscA	1816	NP_220588.1	4.57489
44317	F02	RP880	DNA mismatch repair protein	1822	NP_221226.1	4.372667
44268	F03	RP534	hypothetical protein RP534	1831	NP_220907.1	4.004915
44384	F04	RP275	GTP-binding protein LepA	1837	NP_220660.1	3.881873
44294	F05	RP614	nitrogen regulation protein NTRY (ntrY)	1840	NP_220981.1	3.883696
44504	F06	RP263	hypothetical protein RP263	1852	NP_220648.1	3.896868
44336	F07	RP146	hypothetical protein RP146	1873	NP_220537.1	4.403097
44512	F08	RP056	tRNA uridine 5-carboxymethylaminomethyl modification enzyme GidA	1900	NP_220450.1	4.357895
44486	F09	RP840	heat shock protein 90	1900	NP_221188.1	4.475789
44400	F10	RP221	threonyl-tRNA synthetase	1942	NP_220607.1	3.856334
44289	F11	RP447	DNA helicase II	2011	NP_220828.1	3.857285
44209	F12	RP132	elongation factor G	2134	NP_220524.1	3.478913
44560	G01	RP174	peptidase	2203	NP_220564.1	3.149796
44461	G02	RP067	DNA topoisomerase IV subunit A	2251	NP_220461.1	3.848512
44557	G03	RP373	malic enzyme	2338	NP_220756.1	4.664243

Clone	Well Position	Locus ID	Description	ORF Length	Accession Number	Average Depth of Coverage
44188	G04	RP807	penicillin-binding protein 1A (mrcA)	2398	NP_221157.1	3.817765
44565	G05	RP784	VIRB4 protein precursor (virB4)	2467	NP_221134.1	3.530604
44286	G06	RP036	CLPB protein (clpB)	2611	NP_220430.1	4.345845
44276	G07	RP856	alanyl-tRNA synthetase	2668	NP_221204.1	3.544978
44206	G08	RP492	pyruvate phosphate dikinase	2677	NP_220868.1	4.700784
44298	G09	RP575	preprotein translocase subunit SecA	2755	NP_220946.1	4.347368
44306	G10	RP835	excinuclease ABC subunit A	2896	NP_221184.1	4.406768
44499	G11	RP617	isoleucyl-tRNA synthetase	3295	NP_220984.1	2.784219
44407	G12	RP140	DNA-directed RNA polymerase subunit beta	4159	NP_220531.1	4.951671

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

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