

***Vibrio cholerae* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 19**

Catalog No. NR-19697

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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:

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 *Vibrio cholerae* (*V. cholerae*) Gateway® clone set consists of 46 plates which contain 3813 sequence validated clones from *V. cholerae*, strain EI Tor N16961 cloned in *Escherichia coli* (*E. coli*) DH10B-T1 cells. Each open reading frame was constructed in vector [pDONR™221](#) with a native start codon and 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 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-19697 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 1 day.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: *Vibrio cholerae* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 19, NR-19697.”

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. Heidelberg, J. F., et al. "DNA Sequence of both Chromosomes of the Cholera Pathogen *Vibrio cholera*." *Nature* 406 (2000): 477-483. PubMed. 10952301.

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Table 1: *Vibrio cholerae* Gateway® Clones, Plate 19

Clone ID	Well Position	ORF Length	Locus ID	Symbol	Product	Accession Number
200129	A02	305	VC0206		GckR family protein	200129
200145	A03	N/A	VCA0927		conserved hypothetical protein	200145
200167	A04	N/A	VCA0340		hypothetical protein	200167
200177	A05	N/A	VCA0351		hypothetical protein	200177
200190	A06	N/A	VCA0924		conserved hypothetical protein	200190
198277	A07	127	VC2177		conserved hypothetical protein	198277
198296	A08	378	VC0994	nagA-1	N-acetylglucosamine-6-phosphate deacetylase	198296
198307	A09	180	VC2159		glycine cleavage system transcriptional repressor, putative	198307
198324	A10	554	VC0991	asnB	asparagine synthetase B, glutamine-hydrolyzing	198324
199730	A11	253	VC0839	tcpJ	leader peptidase TcpJ	199730
199752	A12	N/A	VCA0979		methyl-accepting chemotaxis protein	199752
200110	B01	238	VC0210	rph	ribonuclease PH	200110
200131	B02	309	VC0229		hypothetical protein	200131
200146	B03	346	VC0236	rfaF	ADP-heptose--LPS heptosyltransferase II	200146
200169	B04	N/A	VCA0928		hypothetical protein	200169
198240	B06	N/A	VCA0247		transcriptional regulator, DeoR family	198240
198282	B07	335	VC0534	rpoS	RNA polymerase sigma-38 factor	198282
198297	B08	160	VC2172		conserved hypothetical protein	198297
198311	B09	189	VC0981		conserved hypothetical protein	198311
199732	B11	256	VC0841	acfC	accessory colonization factor AcfC	199732
199754	B12	N/A	VCA0982		transcriptional regulator, LysR family	199754
200112	C01	259	VC0224		lipopolysaccharide biosynthesis glycosyltransferase, putative	200112
200133	C02	318	VC0213	htrB	lipid A biosynthesis lauroyl acyltransferase	200133
200170	C04	463	VC0242	rfbB	phosphomannomutase	200170
198252	C06	271	VC0513		transcriptional regulator, AraC-XylS family	198252
198284	C07	N/A	VC0980	rcp	rcp protein, authentic frameshift	198284
198315	C09	195	VC0525	folk-1	2-amino-4-hydroxy-6-hydroxymethylidihydropteridine pyrophosphokinase	198315
199736	C11	267	VC1430		bax protein, putative	199736
199756	C12	N/A	VCA0964		glycine cleavage operon activator, putative	199756
200118	D01	N/A	VCA0334		hypothetical protein	200118
200139	D02	N/A	VCA0342		hypothetical protein	200139
200154	D03	N/A	VCA0328		biphenyl-2,3-diol 1,2-dioxygenase III-related protein	200154
200172	D04	465	VC0241	rfaA	mannose-1-phosphate guanylyltransferase	200172
198261	D06	69	VC0967		hypothetical protein	198261
198286	D07	349	VC0972		porin, putative	198286
198299	D08	165	VC0990		transcriptional activator RfaH, putative	198299
198316	D09	514	VC0988		proton-peptide symporter family protein	198316
198327	D10	232	VC0528		CDP-ribitol pyrophosphorylase-related protein	198327
199738	D11	276	VC0838	tcpN-toxT	TCP pilus virulence regulatory protein	199738
199759	D12	305	VC2673	menA	1,4-dihydroxy-2-naphthoate octaprenyltransferase	199759
200119	E01	269	VC0221	mutM	formamidopyrimidine-DNA glycosylase	NP_229878.1

Clone ID	Well Position	ORF Length	Locus ID	Symbol	Product	Accession Number
200140	E02	325	VC0212	msbB	lipid A biosynthesis (kdo)2-(lauroyl)-lipid IVA acyltransferase	NP_229869.1
200155	E03	367	VC0244	rfbE	perosamine synthase	NP_229901.1
200173	E04	188	VC0252		acetyltransferase RfbO, CysE-LacA-LpxA-NodL family	NP_229909.1
200183	E05	N/A	VCA0345		conserved hypothetical protein	N/A
198268	E06	295	VC0537	cysM	cysteine synthase B	NP_230188.1
198290	E07	N/A	VCA0248		conserved hypothetical protein	N/A
198302	E08	404	VC0993	nagC	N-acetylglucosamine repressor	NP_230639.1
198317	E09	208	VC0532	pcm	protein-L-isoaspartate O-methyltransferase	NP_230183.1
198328	E10	623	VC2161		methyl-accepting chemotaxis protein	NP_231792.1
199740	E11	N/A	VCA0986		conserved hypothetical protein	N/A
199761	E12	N/A	VCA0963		hypothetical protein	N/A
200121	F01	271	VC0247	rfbI	lipopolysaccharide-O-antigen transport protein	NP_229904.1
200142	F02	N/A	VCA0337	mccF-1	microcin immunity protein MccF	N/A
200160	F03	N/A	VCA0346		H-REV 107-related protein	N/A
200174	F04	471	VC0249	rfbL	rfbL protein	NP_229906.1
198270	F06	306	VC0977		conserved hypothetical protein	NP_230624.1
198303	F08	173	VC0983	toxS	regulatory protein ToxS	NP_230629.1
198318	F09	528	VC0992		glutathione-regulated potassium-efflux system protein KefB, putative	NP_230638.1
199744	F11	281	VC1429		hypothetical protein	NP_231072.1
199762	F12	144	VC2654		conserved hypothetical protein	NP_232282.1
200123	G01	282	VC0204		conserved hypothetical protein	NP_229861.1
200143	G02	114	VC0256	orfA	transposase OrfAB, subunit A	NP_229912.1
200162	G03	N/A	VCA0330		hypothetical protein	N/A
200175	G04	188	VC0238		transferase, hexapeptide repeat family	NP_229895.1
200186	G05	N/A	VCA0923		methyl-accepting chemotaxis protein	N/A
198272	G06	306	VC0976		conserved hypothetical protein	NP_230623.1
198293	G07	157	VC0510		DNA repair protein RadC-related protein	NP_230161.1
198305	G08	N/A	VCA0249		cytochrome b561, putative	N/A
198319	G09	208	VC0523		conserved hypothetical protein	NP_230174.1
198331	G10	350	VC0969	cysZ	cysZ protein	NP_230616.1
199748	G11	286	VC1427	potB	spermidine-putrescine ABC transporter, permease protein	NP_231070.1
199763	G12	310	VC1432		conserved hypothetical protein	NP_231075.1
200127	H01	290	VC0257	orfB	transposase OrfAB, subunit B	NP_229913.1
200144	H02	345	VC0223		ADP-heptose--LPS heptosyltransferase II, putative	NP_229880.1
200164	H03	399	VC0237		conserved hypothetical protein	NP_229894.1
200188	H05	653	VC0203		iron(III) ABC transporter, permease protein	NP_229860.1
198276	H06	322	VC0968	cysK	cysteine synthase A	NP_230615.1
198295	H07	158	VC0529		conserved hypothetical protein	NP_230180.1
198306	H08	413	VC0516		phage integrase	NP_230167.1
198320	H09	529	VC0512		methyl-accepting chemotaxis protein	NP_230163.1
198332	H10	635	VC0985	htpG	heat shock protein HtpG	NP_230631.1
199749	H11	116	VC2669		5-carboxymethyl-2-hydroxyuconate delta isomerase, putative	NP_232297.1