

***Vibrio cholerae* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 9**

Catalog No. NR-19687

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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-19687 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 9, NR-19687.”

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 cholerae*." *Nature* 406 (2000): 477-483. PubMed: 10952301.

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Table 1: *Vibrio cholerae* Gateway® Clones, Plate 9

Clone ID	Well Position	ORF Length	Locus ID	Symbol	Product	Accession Number
198462	A02	N/A	VCA0047		conserved hypothetical protein	N/A
198470	A03	N/A	VCA0036		sodium-dicarboxylate symporter	N/A
198479	A04	N/A	VCA0067		hypothetical protein	N/A
198509	A05	261	VC1589	aldC	alpha-acetolactate decarboxylase	NP_231229.1
199644	A06	258	VC1457	ctxA	cholera enterotoxin, A subunit	NP_231100.1
199662	A07	312	VC2697		GGDEF family protein	NP_232325.1
199677	A08	122	VC0862		hypothetical protein	NP_230509.1
199691	A09	147	VC0857		fimbrial assembly protein PilE, putative	NP_230504.1
199700	A10	427	VC1460		hypothetical protein	NP_231103.1
199723	A11	N/A	VCA0992	grx2	glutaredoxin 2	N/A
200206	A12	N/A	VCA0887		conserved hypothetical protein, authentic frameshift	N/A
198451	B01	N/A	VCA0028		hypothetical protein	N/A
198463	B02	127	VC1574		hypothetical protein	NP_231214.1
198471	B03	147	VC1663	hslJ	heat shock protein HslJ	NP_231299.1
198481	B04	N/A	VCA0032		hypothetical protein	N/A
198511	B05	N/A	VCA0056		transcriptional regulator, MerR family	N/A
199646	B06	N/A	VCA1025	nagB	glucosamine-6-phosphate isomerase	N/A
199664	B07	N/A	VCA0994		hypothetical protein	N/A
199678	B08	359	VC1454	rstA1	RstA1 protein	NP_231097.1
199692	B09	413	VC0860		hypothetical protein	NP_230507.1
199703	B10	158	VC2695		rRNA methylase, SpoU family	NP_232323.1
199725	B11	167	VC2694	sodA	superoxide dismutase, Mn	NP_232322.1
200207	B12	64	VC1351		hypothetical protein	NP_230995.1
198452	C01	330	VC1570	qxtB	quinol oxidase, subunit II	NP_231210.1
198464	C02	382	VC1664		ABC transporter, periplasmic substrate-binding protein, putative	NP_231300.1
198473	C03	N/A	VCA0037		conserved hypothetical protein	N/A
198491	C04	229	VC1600		hypothetical protein	NP_231240.1
198515	C05	273	VC1577		hypothetical protein	NP_231217.1
199648	C06	N/A	VCA1001		transcriptional regulator, AraC-XylS family	N/A
199665	C07	N/A	VCA1003		hypothetical protein	N/A
199680	C08	N/A	VCA0993	nemA	N-ethylmaleimide reductase	N/A
199693	C09	148	VC0317		hypothetical protein	NP_229971.1
199704	C10	438	VC0305	rhIB	ATP-dependent RNA helicase RhIB	NP_229960.1
200192	C11	N/A	VCA0894		conserved hypothetical protein	N/A
200208	C12	286	VC2532		conserved hypothetical protein	NP_232160.1
198454	D01	338	VC1563		conserved hypothetical protein	NP_231203.1
198465	D02	N/A	VCA0048		conserved hypothetical protein	N/A
198474	D03	417	VC1658	sdaC-2	serine transporter	NP_231295.1
198493	D04	233	VC1568		ABC transporter, ATP-binding protein	NP_231208.1
198517	D05	274	VC1598		ABC transporter, periplasmic substrate-binding protein-related protein	NP_231238.1
199650	D06	N/A	VCA1027		maltose operon periplasmic protein, putative	N/A
199666	D07	330	VC0308		hypothetical protein	NP_229963.1

Clone ID	Well Position	ORF Length	Locus ID	Symbol	Product	Accession Number
199682	D08	381	VC0856	dnaJ	dnaJ protein	NP_230503.1
199694	D09	N/A	VCA1028	ompS	maltoporin	N/A
199707	D10	167	VC2691		periplasmic protein cpxP, putative	NP_232319.1
200194	D11	N/A	VCA0910	tonB1	tonB1 protein	N/A
200209	D12	87	VC2543		hypothetical protein	NP_232171.1
198455	E01	N/A	VCA0043		conserved hypothetical protein	N/A
198466	E02	404	VC1566		conserved hypothetical protein	NP_231206.1
198475	E03	152	VC1575		hypothetical protein	NP_231215.1
198499	E04	N/A	VCA0029		transcriptional regulator, putative	N/A
198519	E05	N/A	VCA0035		phosphatidylglycerophosphatase B, putative	N/A
199652	E06	N/A	VCA1010		conserved hypothetical protein	N/A
199668	E07	N/A	VCA1008		outer membrane protein, putative	N/A
199683	E08	127	VC1462	rstB2	RstB2 protein	NP_231105.1
199696	E09	419	VC0307	rho	transcription termination factor Rho	NP_229962.1
199711	E10	N/A	VCA0999		transcriptional regulator, TetR family	N/A
200196	E11	251	VC1359		amino acid ABC transporter, ATP-binding protein	NP_231003.1
200212	E12	N/A	VCA0889		transcriptional regulator, LysR family	N/A
198457	F01	105	VC1576		conserved hypothetical protein	NP_231216.1
198467	F02	N/A	VCA0039		hypothetical protein	N/A
198476	F03	419	VC1565		outer membrane protein TolC, putative	NP_231205.1
198501	F04	N/A	VCA0053	deoD-2	purine nucleoside phosphorylase	N/A
199634	F05	228	VC2692	cpxR	transcriptional regulator CpxR	NP_232320.1
199654	F06	302	VC2690		conserved hypothetical protein	NP_232318.1
199671	F07	112	VC1455	rstR-1	transcriptional repressor RstR	NP_231098.1
199684	F08	N/A	VCA1026		conserved hypothetical protein	N/A
199697	F09	N/A	VCA1005		transcriptional regulator, MarR family	N/A
199713	F10	200	VC0859		hypothetical protein	NP_230506.1
200200	F11	N/A	VCA0913	hutB	hemin ABC transporter, periplasmic hemin-binding protein HutB	N/A
200214	F12	315	VC1955		transcriptional regulator, LysR family	NP_231589.1
198458	G01	353	VC1599		GGDEF family protein	NP_231239.1
198468	G02	405	VC1595	galK	galactokinase	NP_231235.1
198477	G03	171	VC1583	sodC	superoxide dismutase, Cu-Zn	NP_231223.1
198503	G04	N/A	VCA0042		hypothetical protein	N/A
199636	G05	236	VC0312		NAD(P)H-flavin reductase	NP_229966.1
199656	G06	295	VC2685	metF	5,10-methylenetetrahydrofolate reductase	NP_232313.2
199672	G07	335	VC2688	glpX	glpX protein	NP_232316.1
199685	G08	N/A	VCA1016		hypothetical protein	N/A
199698	G09	425	VC2681		malate oxidoreductase, putative	NP_232309.1
199715	G10	N/A	VCA1004		conserved hypothetical protein	N/A
200202	G11	N/A	VCA0902		hypothetical protein	N/A
200216	G12	323	VC1956		lytic murein transglycosylase, putative	NP_231590.1
198460	H01	354	VC1596	galT	galactose-1-phosphate uridylyltransferase	NP_231236.2
198469	H02	146	VC1587		conserved hypothetical protein	NP_231227.1
198478	H03	425	VC1567		conserved hypothetical protein	NP_231207.1
198507	H04	258	VC1603		hypothetical protein	NP_231243.1
199642	H05	N/A	VCA1013		conserved hypothetical protein	N/A
199660	H06	N/A	VCA0991		transcriptional regulator, LysR family	N/A
199673	H07	N/A	VCA1024		hypothetical protein	N/A
199687	H08	137	VC0861		type IV pilin, putative	NP_230508.1
199699	H09	N/A	VCA1012		conserved hypothetical protein	N/A
199721	H10	N/A	VCA1011		glutaredoxin-related protein	N/A
200204	H11	285	VC0201		iron(III) ABC transporter, ATP-binding protein	NP_229858.1