

***Vibrio cholerae* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 40**

Catalog No. NR-19718

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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.

Plate orientation and viability were confirmed for NR-19718.

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-19718 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 40, NR-19718.”

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® Clone Set, Recombinant in *Escherichia coli*, Plate 40¹

Clone ID	Well Position	ORF Length	Locus ID	Symbol	Product	Accession Number
214643	A02	399	VC1458	zot	zona occludens toxin	NP_231101.1
214677	A03	524	VC1414		thermostable carboxypeptidase 1	NP_231057.1
214714	A04	N/A	VCA0414		hypothetical protein	N/A
214747	A05	N/A	VCA0393		hypothetical protein	N/A
214509	A06	63	VC0874		hypothetical protein	NP_230521.1
214563	A07	172	VC1483	fabA	3-hydroxydecanoyl-(acyl-carrier-protein) dehydrata	NP_231124.1
214979	A08	311	VC0533	nlpD	lipoprotein NlpD	NP_230184.1
215011	A09	374	VC1690		alpha-1,6-galactosidase, putative	NP_231326.1
214787	A10	212	VC1329		opacity protein-related protein	NP_230973.1
214822	A11	451	VC1276		sensor histidine kinase	NP_230921.1
215166	A12	N/A	VCA0434		hypothetical protein	N/A
214610	B01	510	VC0027	ilvA	threonine dehydratase	NP_229686.1
214647	B02	184	VC0858		type IV pilin, putative	NP_230505.1
214683	B03	221	VC0826	tcpP	toxin co-regulated pilus biosynthesis protein P	NP_230474.1
214718	B04	387	VC1970	benE	benzoate transport protein	NP_231604.1
214754	B05	N/A	VCA0389		hypothetical protein	N/A
214515	B06	258	VC2061		ParA family protein	NP_231693.1
214567	B07	183	VC0095	ubiC	chorismate--pyruvate lyase	NP_229754.1
214983	B08	410	VC0515		conserved hypothetical protein	NP_230166.1
215015	B09	N/A	VCA0075		hypothetical protein	N/A
214790	B10	553	VC1651	vieB	response regulator VieB	NP_231288.1
214826	B11	218	VC1270		glyoxylase II family protein	NP_230915.1
215168	B12	375	VC0320	coaA	pantothenate kinase	NP_229974.1
214615	C01	613	VC0028	ilvD	dihydroxy-acid dehydratase	NP_229687.1
214655	C02	247	VC1419		hypothetical protein	NP_231062.1
214687	C03	641	VC1418		hypothetical protein	NP_231061.1
214723	C04	432	VC2602	purA	adenylosuccinate synthetase	NP_232230.1
214766	C05	N/A	VCA0882		hypothetical protein	N/A
214518	C06	N/A	VCA1107		hypothetical protein	N/A
214571	C07	207	VC2057	ccmA	heme exporter protein A	NP_231689.1
214987	C08	426	VC0503		conserved hypothetical protein	NP_230154.1
215026	C09	303	VC1580		transcriptional regulator, LysR family	NP_231220.1
214795	C10	65	VC2468		hypothetical protein	NP_232097.1
214831	C11	N/A	VCA1034		methyl-accepting chemotaxis protein	N/A
215172	C12	N/A	VCA0425		hypothetical protein	N/A
214618	D01	N/A	VCA0450		hypothetical protein	N/A
214659	D02	104	VC1393	sugE	sugE protein	NP_231037.1
214691	D03	N/A	VCA0419		hypothetical protein	N/A
214727	D04	460	VC2564	dbpA	ATP-dependent RNA helicase DbpA	NP_232192.1
214491	D05	108	VC0678	hlyU	transcriptional activator HlyU	NP_230327.1
214523	D06	143	VC0413		hypothetical protein	NP_230067.1
214575	D07	35	VC0375		hypothetical protein	NP_230029.1
214990	D08	553	VC2174	ushA	UDP-sugar hydrolase	NP_231805.1
215039	D09	N/A	VCA0041	glts	sodium-glutamate symporter	N/A
214799	D10	118	VC0006	rnpA	ribonuclease P protein component	NP_062590.1
214841	D11	N/A	VCA0276	gcvP	glycine cleavage system P protein, authentic frame	N/A
215176	D12	N/A	VCA0888		transcriptional regulator, LuxR family	N/A
214620	E01	N/A	VCA0997		hypothetical protein	N/A
214662	E02	N/A	VC1395	cheY-1	chemotaxis protein CheY, authentic frameshift	N/A
214693	E03	269	VC2566		conserved hypothetical protein	NP_232194.1

Clone ID	Well Position	ORF Length	Locus ID	Symbol	Product	Accession Number
214730	E04	201	VC2604	slyD	peptidyl-prolyl cis-trans isomerase, FKBP-type	NP_232232.1
214495	E05	135	VC0656	hoID	DNA polymerase III, psi subunit	NP_230305.1
214527	E06	149	VC0881		conserved hypothetical protein	NP_230528.1
214955	E07	201	VC1040	cobA	cob(I)alamin adenosyltransferase	NP_230685.1
214995	E08	31	VC1705		hypothetical protein	NP_231341.1
215041	E09	235	VC1668		pseudouridine synthase Rlu family protein	NP_231304.1
214803	E10	141	VC1272		hypothetical protein	NP_230917.1
214854	E11	N/A	VC2700	pulA	pullulanase, authentic frameshift	N/A
215186	E12	451	VC2542	mpl	UDP-N-acetylmuramate-L-alanyl-gamma-D-glutamyl-mes	NP_232170.1
214627	F01	72	VC2679	rpmE	ribosomal protein L31	NP_232307.1
214667	F02	130	VC2582	rpsH	ribosomal protein S8	NP_232210.1
214703	F03	302	VC2560	cysD	sulfate adenylate transferase, subunit 2	NP_232188.2
214734	F04	626	VC1966		conserved hypothetical protein	NP_231600.1
214499	F05	193	VC2303		conserved hypothetical protein	NP_231934.1
214532	F06	174	VC2059	cheW-1	purine-binding chemotaxis protein CheW	NP_231691.1
214959	F07	261	VC2194	flgH	flagellar L-ring protein FlgH	NP_231825.1
214998	F08	N/A	VCA0115		hypothetical protein	N/A
214771	F09	109	VC2516		anti-sigma B factor antagonist, putative	NP_232145.1
214807	F10	148	VC2470		hypothetical protein	NP_232099.1
215147	F11	334	VC2751	add	adenosine deaminase	NP_232377.1
215188	F12	N/A	VCA0909	hutW	hutW protein	N/A
214635	G01	335	VC2677		transcriptional repressor, LacI family	NP_232305.1
214671	G02	174	VC2629	aroK	shikimate kinase	NP_232257.1
214707	G03	326	VC2603		asparaginase, putative	NP_232231.1
214739	G04	N/A	VCA0387		toxin resistance protein	N/A
214503	G05	512	VC0664	lysU	lysyl-tRNA synthetase, heat inducible	NP_230313.1
214551	G06	55	VC1466		hypothetical protein	NP_231109.1
214967	G07	193	VC1017		RnfA-related protein	NP_230663.2
215003	G08	331	VC1683	sapD	peptide ABC transporter, ATP-binding protein	NP_231319.1
214775	G09	149	VC2502	hoIC	DNA polymerase III, chi subunit	NP_232131.1
214811	G10	149	VC1610		hypothetical protein	NP_231250.1
215152	G11	406	VC2731	epsF	general secretion pathway protein F	NP_232358.1
215195	G12	582	VC2548		conserved hypothetical protein	NP_232176.1
214639	H01	N/A	VCA1006		organic hydroperoxide resistance protein, putative	N/A
214675	H02	N/A	VCA0958		hypothetical protein	N/A
214709	H03	N/A	VCA0420		hypothetical protein	N/A
214743	H04	N/A	VCA0354		hypothetical protein	N/A
214507	H05	N/A	VCA0674	narP	nitrate-nitrite response regulator NarP, authentic	N/A
214558	H06	454	VC0090	dinF	DNA-damage-inducible protein F	NP_229749.1
214968	H07	267	VC0526		undecaprenol kinase, putative	NP_230177.1
215007	H08	N/A	VCA0078		hypothetical protein	N/A
214779	H09	206	VC1939		conserved hypothetical protein	NP_231573.1
214815	H10	409	VC2474	visC	visC protein	NP_232103.1
215160	H11	N/A	VCA0430		hypothetical protein	N/A

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