Helicobacter pylori Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2

Catalog No. NR-19478

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Contributor:

Pathogen Functional Genomics Resource Center at the J. Craig Venter Institute

Manufacturer:

BEI Resources

Product Description:

The *Helicobacter pylori* (*H. pylori)* Gateway® clone set consists of approximately 1600 sequence validated clones from *H. pylori*, strain 26695 and strain J99 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.

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.

Note: 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 cannot confirm or validate any clone not identified on the plate information table.

Packaging/Storage:

NR-19478 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 24 hours.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Helicobacter pylori* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2, NR-19478."

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:

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References:

1. Alm, R. A., et al. "Genomic-Sequence Comparison of Two Unrelated Isolates of the Human Gastric Pathogen *Helicobacter pylori*." Nature 397 (1999): 176-180. PubMed: 9923682.
2. Jungblut, P. R., et al. "Comparative Proteome Analysis of *Helicobacter pylori*." Mol. Microbiol. 36 (2000): 710-725. PubMed: 10844659.
3. Tomb, J. F., et al. "The Complete Genome Sequence of the Gastric Pathogen *Helicobacter pylori*. " Nature 388 (1997): 539-547. PubMed: 9252185.

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Table 1: *Helicobacter pylori* Gateway® Clone Set, Recombinant in *Escherichia coli*, Plate 2 (ZHPAB)[1]

Strain	Clone	Well Position	Locus ID	Description (Gene name)	ORF Length	Accession Number	Average Depth of Coverage
26695	56250	A01	HP0411	hypothetical protein	352	NP_207209.1	2
26695	56254	A02	HP0467	conserved hypothetical integral membrane protein	382	NP_207265.1	2
26695	56262	A03	HP0824	thioredoxin	355	NP_207617.1	1.904225352
26695	56266	A04	HP0682	hypothetical protein	415	NP_207476.1	2
26695	56274	A05	HP1131	ATP synthase F1, subunit epsilon	409	NP_207922.1	1.91198044
26695	56278	A06	HP1340	biopolymer transport protein	424	NP_208132.1	2
26695	56282	A07	HP1295	ribosomal protein S11	430	NP_208087.1	1.990697674
26695	56287	A08	HP0496	conserved hypothetical protein	436	NP_207293.1	-
26695	56290	A09	HP0342	hypothetical protein	427	NP_207140.1	1.817330211
26695	56299	A10	HP0622	hypothetical protein	397	NP_207416.1	-
26695	56302	A11	HP0700	diacylglycerol kinase	421	NP_207494.1	1.90023753
26695	56307	A12	HP0368	hypothetical protein	436	NP_207166.1	-
26695	56310	B01	HP0199	hypothetical protein	391	NP_206998.1	2
26695	56314	B02	HP1557	flagellar basal-body protein	364	NP_208348.1	2
26695	56322	B03	HP0713	conserved hypothetical protein	379	NP_207507.1	2
26695	56326	B04	HP1288	hypothetical protein	433	NP_208080.1	1.856812933
26695	56330	B05	HP0716	conserved hypothetical protein	436	NP_207510.1	2
26695	56334	B06	HP0245	hypothetical protein	352	NP_207043.1	2
26695	56338	B07	HP1025	putative heat shock protein	406	NP_207815.1	2
26695	56342	B08	HP1314	ribosomal protein L22	403	NP_208106.1	2
26695	56346	B09	HP0614	hypothetical protein	370	NP_207409.1	1.989189189
26695	56350	B10	HP0712	hypothetical protein	409	NP_207506.1	1.987775061
26695	56354	B11	HP1510	conserved hypothetical protein	388	NP_208301.1	1.994845361
26695	56358	B12	HP1303	ribosomal protein L18	394	NP_208095.1	2
26695	56362	C01	HP1455	hypothetical protein	427	NP_208246.1	1.990632319
26695	56366	C02	HP0869	hydrogenase expression/formation protein	388	NP_207663.1	2
26695	56371	C03	HP1033	hypothetical protein	430	NP_207823.1	-
26695	56375	C04	HP0345	hypothetical protein	370	NP_207143.1	-
26695	56379	C05	HP0126	ribosomal protein L20	385	NP_206926.1	-
26695	56382	C06	HP0206	hypothetical protein	361	NP_207005.1	1.95567867
26695	56390	C08	HP0241	hypothetical protein	430	NP_207039.1	1.986046512
26695	56394	C09	HP1551	conserved hypothetical secreted protein	418	NP_208342.1	2

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Strain	Clone	Well Position	Locus ID	Description (Gene name)	ORF Length	Accession Number	Average Depth of Coverage
26695	56398	C10	HP1109	pyruvate ferredoxin oxidoreductase, delta subunit	427	NP_207900.1	2
26695	56402	C11	HP0985	hypothetical protein	358	NP_207776.1	1.913407821
26695	56410	C12	HP1326	hypothetical protein	412	NP_208118.1	1.839805825
26695	56414	D01	HP1223	hypothetical protein	367	NP_208015.1	2
26695	56418	D02	HP0236	hypothetical protein	406	NP_207034.1	1.990147783
26695	56422	D03	HP0546	cag pathogenicity island protein	382	NP_207342.1	2
26695	56426	D04	HP0872	alkylphosphonate uptake protein	364	NP_207666.1	-
26695	56430	D05	HP0311	hypothetical protein	403	NP_207109.1	1.990074442
26695	56434	D06	HP0274	conserved hypothetical protein	433	NP_207072.1	2
26695	56443	D07	HP0427	hypothetical protein	370	NP_207225.1	-
26695	56446	D08	HP1524	hypothetical protein	382	NP_208314.1	1.92408377
26695	56450	D09	HP1309	ribosomal protein L14	403	NP_208101.1	1.990074442
26695	56462	D10	HP1511	hypothetical protein	361	NP_208302.1	2
26695	56466	D11	HP0204	hypothetical protein	418	NP_207003.1	1.990430622
26695	56470	D12	HP1330	conserved hypothetical integral membrane protein	382	NP_208122.1	2
26695	56474	E01	HP1225	conserved hypothetical integral membrane protein	427	NP_208017.1	2
26695	56478	E02	HP0944	conserved hypothetical protein	412	NP_207736.1	1.990291262
26695	56482	E03	HP1296	ribosomal protein S13	397	NP_208088.1	-
26695	56486	E04	HP0938	hypothetical protein	382	NP_207730.1	2
26695	56490	E05	HP1548	conserved hypothetical integral membrane protein	373	NP_208339.1	1.986595174
26695	56494	E06	HP0436	hypothetical protein	400	NP_207234.1	2
26695	56498	E07	HP1147	ribosomal protein L19	391	NP_207938.1	2
26695	56502	E08	HP1382	hypothetical protein	427	NP_208173.1	1.990632319
26695	56506	E09	HP0034	aspartate 1-decarboxylase	388	NP_206836.1	2
26695	56510	E10	HP0751	polar flagellin	394	NP_207544.1	1.987309645
26695	56514	E11	HP0753	flagellar protein	415	NP_207546.1	1.944578313
26695	56519	E12	HP1292	ribosomal protein L17	385	NP_208084.1	-
26695	56523	F01	HP0895	hypothetical protein	412	NP_207688.1	-
26695	56526	F02	HP0573	hypothetical protein	367	NP_207368.1	2
26695	56530	F03	HP0947	hypothetical protein	397	NP_207739.1	1.989924433
26695	56534	F04	HP1305	ribosomal protein S8	430	NP_208097.1	2
26695	56542	F05	HP1047	ribosome-binding factor A	370	NP_207838.1	2
26695	56546	F06	HP0011	co-chaperone	391	NP_206813.1	1.964194373
26695	56550	F07	HP0339	hypothetical protein	385	NP_207137.1	2
26695	56554	F08	HP1458	thioredoxin	349	NP_208249.1	2
26695	56559	F09	HP1067	chemotaxis protein	409	NP_207858.1	-
26695	56563	F10	HP1096	IS605 transposase	463	NP_207887.1	2
26695	56566	F11	HP0167	hypothetical protein	508	NP_206966.1	2
26695	56570	F12	HP1129	biopolymer transport protein	436	NP_207920.1	2.096330275
26695	56583	G01	HP1154	hypothetical protein	442	NP_207945.1	2
26695	56590	G02	HP1027	ferric uptake regulation protein	487	NP_207817.1	2
26695	56598	G03	HP1217	hypothetical protein	514	NP_208009.1	2
26695	56603	G04	HP0647	hypothetical protein	442	NP_207441.1	2
26695	56611	G05	HP1008	IS200 insertion sequence from SARA17	451	NP_207798.1	2
26695	56614	G06	HP0800	molybdopterin converting factor, subunit 2	472	NP_207593.1	2

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Strain	Clone	Well Position	Locus ID	Description (Gene name)	ORF Length	Accession Number	Average Depth of Coverage
26695	56619	G07	HP0198	nucleoside diphosphate kinase	448	NP_206997.1	2
26695	56623	G08	HP0343	hypothetical protein	457	NP_207141.1	2
26695	56626	G09	HP1587	conserved hypothetical protein	502	NP_208378.1	1.727091633
26695	56630	G10	HP1302	ribosomal protein S5	496	NP_208094.1	2
26695	56638	G11	HP0865	deoxyuridine 5'-triphosphate nucleotidohydrolase	472	NP_207659.1	2
26695	56643	G12	HP1444	small protein	493	NP_208235.1	2
26695	56646	H01	HP1301	ribosomal protein L15	442	NP_208093.2	2
26695	56651	H02	HP0988	IS605 transposase	463	NP_207779.1	2
26695	56662	H03	HP1233	hypothetical protein	496	NP_208025.1	2
26695	56667	H04	HP1137	ATP synthase F0, subunit b'	469	NP_207928.1	2
26695	56671	H05	HP1202	ribosomal protein L11	460	NP_207993.1	-
26695	56675	H06	HP1065	hypothetical protein	442	NP_207856.1	2
26695	56679	H07	HP1542	hypothetical protein	445	NP_208333.1	2
26695	56682	H08	HP0820	hypothetical protein	496	NP_207613.1	1.947580645
26695	56687	H09	HP0702	hypothetical protein	511	NP_207496.1	-
26695	56691	H10	HP1484	conserved hypothetical integral membrane protein	481	NP_208275.1	2
26695	56698	H11	HP0514	ribosomal protein L9	487	NP_207311.1	1.991786448
26695	56703	H12	HP1388	hypothetical protein	484	NP_208179.1	2
26695	56250	A01	HP0411	hypothetical protein	352	NP_207209.1	2
26695	56254	A02	HP0467	conserved hypothetical integral membrane protein	382	NP_207265.1	2

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

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