

TABLE S1. List of strains in the study, including additional metadata where available.

Strain	Serogroup	Serotype	Biotype	ctxB allele	Year	Location	Origin	Source
<i>Vibrio cholerae</i>								
2010EL-1786 ^{a,b,c}	O1	Ogawa	El Tor	ctxB7	2010	Haiti	NA	NA
2016V-1085 ^{a,b,c}	O141	NA	NA	ctxB1	2016	New Mexico, USA	Human isolate	Stool
3528-08 ^{a,b,c}	NAG	NA	NA	ctxB1	2008	Gulf Coast TX, USA	Human isolate	Stool
3566-08 ^{a,b,c}	O141	NA	NA	ctxB1	2008	NJ, USA	Human isolate	Stool
3569-08 ^{a,b,c}	O1	Inaba	El Tor	ctxB1	2008	Gulf Coast LA, USA	Human isolate	Stool
BX 330286 ^{a,b}	O1	Inaba	NA	ctxB2	1986	Australia	NA	NA
2011V-1043 ^{a,b,c}	O75	NA	NA	ctxB1	2011	FL, USA	Human isolate	Stool
MJ1236 ^a	O1	Inaba	El Tor	NA	1994	Bangladesh, India	NA	NA
N16961 ^{a,b}	O1	NA	El Tor	ctxB3	1975	Bangladesh, India	Human isolate	Stool
O395 ^{a,b,c}	O1	Ogawa	Classical	ctxB1	1965	India	NA	NA
V51 ^{a,b,c}	O141	NA	NA	ctxB1	1987	USA	NA	NA
V52 ^{a,b,c}	O37	NA	NA	ctxB9	1968	Sudan	NA	NA
3541-04 ^{a,b,c}	O75	NA	NA	ctxB1	2004	GA, USA	Human isolate	NA
E506 ^{a,b}	O1	NA	El Tor	ctxB1	1974	Texas, USA	NA	NA
F9993 ^a	O139	NA	NA	NA	NA	NA	NA	NA
IEC224 ^a	O1	NA	El Tor	NA	1994	Belem, Brazil	Human isolate	Stool
MS6 ^a	O1	NA	El Tor	NA	NA	NA	NA	NA
K2802 ^a	O141	NA	NA	NA	NA	NA	NA	NA
2470-80 ^a	O1	NA	NA	ctxB1	NA	NA	NA	NA
365-96 ^{b,c,d,e}	O27	NA	NA	ctxB8	NA	NA	NA	NA
ATCC 25872 (280 NAG) ^c	O37	NA	NA	NA	NA	NA	NA	NA
CIRS101 ^b	O1	Inaba	El Tor	NA	2002	Bangladesh, India	NA	NA
<i>Vibrio mimicus</i>								
M1567 (523-80) ^{c,f}	NA	NA	NA	NA	NA	NA	NA	NA
06-2455 ^c	NA	NA	NA	NA	NA	NA	NA	NA
2011V-1073 ^c	NA	NA	NA	NA	NA	NA	NA	NA

^aStrains included in the core genome SNP phylogeny

^bStrains included in the *ctxAB* phylogeny

^cStrains included in the *tcpA* phylogeny

^dNCBI accession number for 365-96 *ctxAB* sequence is AF390572.1

^eNCBI accession number for 365-96 *tcpA* sequence is AF390571.1

^fNCBI accession number for M1567 (523-80) *tcpA* sequence is FJ209007.1

#3528-08_NAG_ctxAB_-_ctxB1_allele	AGG GGC TAC AGA GAT AGA TAT TAC AGT AAC TTA GAT ATT GCT CCA GCA GCA GAT GGT TAT	[540]
#2016V-1085_O141_ctxAB_-_ctxB1_allele	...	[540]
#3566-08_O141_ctxAB_-_ctxB1_allele	...	[540]
#V51_O141_ctxAB_-_ctxB1_allele	...	[540]
#2011V-1043_O75_ctxAB_-_ctxB1_allele	...	[540]
#3541-04_O75_ctxAB_-_ctxB1_allele	...	[540]
#3569-08_O1_GC_ctxAB_-_ctxB1_allele	...	[540]
#E506_O1_GC_-_ctxB1_allele	...	[540]
#O395_O1_ctxAB_-_ctxB1_allele	...	[540]
#CIRS101_O1_ctxAB_-_ctxB1_allele	...	[540]
#N16961_O1_ctxAB_-_ctxB3_allele	...	[540]
#2010EL-1786_O1_ctxAB_-_ctxB7_allele	...	[540]
#365-96_O27_cxtAB_-_ctxB8_allele	...	[540]
#V52_O37_ctxAB_-_ctxB9_allele	...	[540]
#BX_330286_O1_ctxAB_-_ctxB2_allele	...	[540]
#3528-08_NAG_ctxAB_-_ctxB1_allele	GGA TTG GCA GGT TTC CCT CCG GAG CAT AGA GCT TGG AGG GAA GAG CCG TGG ATT CAT CAT	[600]
#2016V-1085_O141_ctxAB_-_ctxB1_allele	...	[600]
#3566-08_O141_ctxAB_-_ctxB1_allele	...	[600]
#V51_O141_ctxAB_-_ctxB1_allele	...	[600]
#2011V-1043_O75_ctxAB_-_ctxB1_allele	...	[600]
#3541-04_O75_ctxAB_-_ctxB1_allele	...	[600]
#3569-08_O1_GC_ctxAB_-_ctxB1_allele	...	[600]
#E506_O1_GC_-_ctxB1_allele	...	[600]
#O395_O1_ctxAB_-_ctxB1_allele	...	[600]
#CIRS101_O1_ctxAB_-_ctxB1_allele	...	[600]
#N16961_O1_ctxAB_-_ctxB3_allele	...	[600]
#2010EL-1786_O1_ctxAB_-_ctxB7_allele	...	[600]
#365-96_O27_cxtAB_-_ctxB8_allele	...	[600]
#V52_O37_ctxAB_-_ctxB9_allele	...	[600]
#BX_330286_O1_ctxAB_-_ctxB2_allele	... .T .C	[600]
#3528-08_NAG_ctxAB_-_ctxB1_allele	GCA CCG CCG GGT TGT GGG AAT GCT CCA AGA TCA TCG ATG AGT AAT ACT TGC GAT GAA AAA	[660]
#2016V-1085_O141_ctxAB_-_ctxB1_allele	...	[660]
#3566-08_O141_ctxAB_-_ctxB1_allele	...	[660]
#V51_O141_ctxAB_-_ctxB1_allele	...	[660]
#2011V-1043_O75_ctxAB_-_ctxB1_allele	...	[660]
#3541-04_O75_ctxAB_-_ctxB1_allele	...	[660]
#3569-08_O1_GC_ctxAB_-_ctxB1_allele	...	[660]
#E506_O1_GC_-_ctxB1_allele	...	[660]
#O395_O1_ctxAB_-_ctxB1_allele	...	[660]
#CIRS101_O1_ctxAB_-_ctxB1_allele	...	[660]
#N16961_O1_ctxAB_-_ctxB3_allele	...	[660]
#2010EL-1786_O1_ctxAB_-_ctxB7_allele	...	[660]
#365-96_O27_cxtAB_-_ctxB8_allele	...	[660]
#V52_O37_ctxAB_-_ctxB9_allele	...	[660]
#BX_330286_O1_ctxAB_-_ctxB2_allele	...	[660]

#3528-08_NAG_ctxAB_-ctxB1_allele	ACC CAA AGT CTA GGT GTA AAA TTC CTT GAC GAA TAC CAA TCT AAA GTT AAA AGA CAA ATA	[720]
#2016V-1085_O141_ctxAB_-ctxB1_allele	...	[720]
#3566-08_O141_ctxAB_-ctxB1_allele	...	[720]
#V51_O141_ctxAB_-ctxB1_allele	...	[720]
#2011V-1043_O75_ctxAB_-ctxB1_allele	...	[720]
#3541-04_O75_ctxAB_-ctxB1_allele	...	[720]
#3569-08_O1_GC_ctxAB_-ctxB1_allele	...	[720]
#E506_O1_GC_-ctxB1_allele	...	[720]
#O395_O1_ctxAB_-ctxB1_allele	...	[720]
#CIRS101_O1_ctxAB_-ctxB1_allele	...	[720]
#N16961_O1_ctxAB_-ctxB3_allele	...	[720]
#2010EL-1786_O1_ctxAB_-ctxB7_allele	...	[720]
#365-96_O27_cxtAB_-ctxB8_allele	...	[720]
#V52_O37_ctxAB_-ctxB9_allele	...	[720]
#BX_330286_O1_ctxAB_-ctxB2_allele	... A...	[720]
#3528-08_NAG_ctxAB_-ctxB1_allele	TTT TCA GGC TAT CAA TCT GAT ATT GAT ACA CAT AAT AGA ATT AAG GAT GAA TTA TGA TTA	[780]
#2016V-1085_O141_ctxAB_-ctxB1_allele	...	[780]
#3566-08_O141_ctxAB_-ctxB1_allele	...	[780]
#V51_O141_ctxAB_-ctxB1_allele	...	[780]
#2011V-1043_O75_ctxAB_-ctxB1_allele	...	[780]
#3541-04_O75_ctxAB_-ctxB1_allele	...	[780]
#3569-08_O1_GC_ctxAB_-ctxB1_allele	...	[780]
#E506_O1_GC_-ctxB1_allele	...	[780]
#O395_O1_ctxAB_-ctxB1_allele	...	[780]
#CIRS101_O1_ctxAB_-ctxB1_allele	...	[780]
#N16961_O1_ctxAB_-ctxB3_allele	...	[780]
#2010EL-1786_O1_ctxAB_-ctxB7_allele	...	[780]
#365-96_O27_cxtAB_-ctxB8_allele	... G...	[780]
#V52_O37_ctxAB_-ctxB9_allele	...	[780]
#BX_330286_O1_ctxAB_-ctxB2_allele	...	[780]
#3528-08_NAG_ctxAB_-ctxB1_allele	AAT TAA AAT TTG GTG TTT TTT TTA CAG TTT TAC TAT CTT CAG CAT ATG CAC ATG GAA CAC	[840]
#2016V-1085_O141_ctxAB_-ctxB1_allele	...	[840]
#3566-08_O141_ctxAB_-ctxB1_allele	...	[840]
#V51_O141_ctxAB_-ctxB1_allele	...	[840]
#2011V-1043_O75_ctxAB_-ctxB1_allele	...	[840]
#3541-04_O75_ctxAB_-ctxB1_allele	...	[840]
#3569-08_O1_GC_ctxAB_-ctxB1_allele	...	[840]
#E506_O1_GC_-ctxB1_allele	...	[840]
#O395_O1_ctxAB_-ctxB1_allele	...	[840]
#CIRS101_O1_ctxAB_-ctxB1_allele	...	[840]
#N16961_O1_ctxAB_-ctxB3_allele	...	[840]
#2010EL-1786_O1_ctxAB_-ctxB7_allele	... A...	[840]
#365-96_O27_cxtAB_-ctxB8_allele	...	[840]
#V52_O37_ctxAB_-ctxB9_allele	...	[840]
#BX_330286_O1_ctxAB_-ctxB2_allele	...	[840]

Start of ctxB

End of ctxA

#3528-08_NAG_ctxAB_-_ctxB1_allele	AAA AAG CGA TTG AAA GGA TGA AGG ATA CCC TGA GGA TTG CAT ATC TTA CTG AAG CTA AAG	[1080]
#2016V-1085_O141_ctxAB_-_ctxB1_allele	...	[1080]
#3566-08_O141_ctxAB_-_ctxB1_allele	...	[1080]
#V51_O141_ctxAB_-_ctxB1_allele	...	[1080]
#2011V-1043_O75_ctxAB_-_ctxB1_allele	...	[1080]
#3541-04_O75_ctxAB_-_ctxB1_allele	...	[1080]
#3569-08_O1_GC_ctxAB_-_ctxB1_allele	...	[1080]
#E506_O1_GC_-_ctxB1_allele	...	[1080]
#O395_O1_ctxAB_-_ctxB1_allele	...	[1080]
#CIRS101_O1_ctxAB_-_ctxB1_allele	...	[1080]
#N16961_O1_ctxAB_-_ctxB3_allele	...	[1080]
#2010EL-1786_O1_ctxAB_-_ctxB7_allele	...	[1080]
#365-96_O27_cxtAB_-_ctxB8_allele	...	[1080]
#V52_O37_ctxAB_-_ctxB9_allele	...	[1080]
#BX_330286_O1_ctxAB_-_ctxB2_allele	...	[1080]

#3528-08_NAG_ctxAB_-_ctxB1_allele	TCG AAA AGT TAT GTG TAT GGA ATA ATA AAA CGC CTC ATG CGA TTG CCG CAA TTA GTA TGG	[1140]
#2016V-1085_O141_ctxAB_-_ctxB1_allele	...	[1140]
#3566-08_O141_ctxAB_-_ctxB1_allele	...	[1140]
#V51_O141_ctxAB_-_ctxB1_allele	...	[1140]
#2011V-1043_O75_ctxAB_-_ctxB1_allele	...	[1140]
#3541-04_O75_ctxAB_-_ctxB1_allele	...	[1140]
#3569-08_O1_GC_ctxAB_-_ctxB1_allele	...	[1140]
#E506_O1_GC_-_ctxB1_allele	...	[1140]
#O395_O1_ctxAB_-_ctxB1_allele	...	[1140]
#CIRS101_O1_ctxAB_-_ctxB1_allele	...	[1140]
#N16961_O1_ctxAB_-_ctxB3_allele	...	[1140]
#2010EL-1786_O1_ctxAB_-_ctxB7_allele	...	[1140]
#365-96_O27_cxtAB_-_ctxB8_allele	...	[1140]
#V52_O37_ctxAB_-_ctxB9_allele	...	[1140]
#BX_330286_O1_ctxAB_-_ctxB2_allele	...	[1140]

End of *ctxB*

#3528-08_NAG_ctxAB_-_ctxB1_allele	CAA ATT AA	[1148]
#2016V-1085_O141_ctxAB_-_ctxB1_allele	...	[1148]
#3566-08_O141_ctxAB_-_ctxB1_allele	...	[1148]
#V51_O141_ctxAB_-_ctxB1_allele	...	[1148]
#2011V-1043_O75_ctxAB_-_ctxB1_allele	...	[1148]
#3541-04_O75_ctxAB_-_ctxB1_allele	...	[1148]
#3569-08_O1_GC_ctxAB_-_ctxB1_allele	...	[1148]
#E506_O1_GC_-_ctxB1_allele	...	[1148]
#O395_O1_ctxAB_-_ctxB1_allele	...	[1148]
#CIRS101_O1_ctxAB_-_ctxB1_allele	...	[1148]
#N16961_O1_ctxAB_-_ctxB3_allele	...	[1148]
#2010EL-1786_O1_ctxAB_-_ctxB7_allele	...	[1148]
#365-96_O27_cxtAB_-_ctxB8_allele	...	[1148]
#V52_O37_ctxAB_-_ctxB9_allele	...	[1148]
#BX_330286_O1_ctxAB_-_ctxB2_allele	...	[1148]

FIG S2. Evidence of mutations in NAG O-Antigen. Whole genome alignment with Mauve 2.4.0 shows O-antigen regions of the NAG strain 3528-08 (top), O141 reference strain 3566-08, and O75 Cluster I and II reference strains 3541-04 and 2011V-1043 (bottom), and the location of mutations in the NAG strain O-antigen region - an unknown gene that is *wbfA-like* and the *pglJ* gene. O-antigen junction genes *gmhD* and *rjg* are labeled in red and blue, respectively. The O-antigen region lengths are listed in base pairs (bp). Note that the coordinates of these regions are reverse-complemented to display the O-antigen region with *gmhD* on the 5' end and *rgj* on the 3' end of the of the gene cluster. The *wbfA-like* gene and *pglJ* gene are also present in O75 as denoted in the figure.

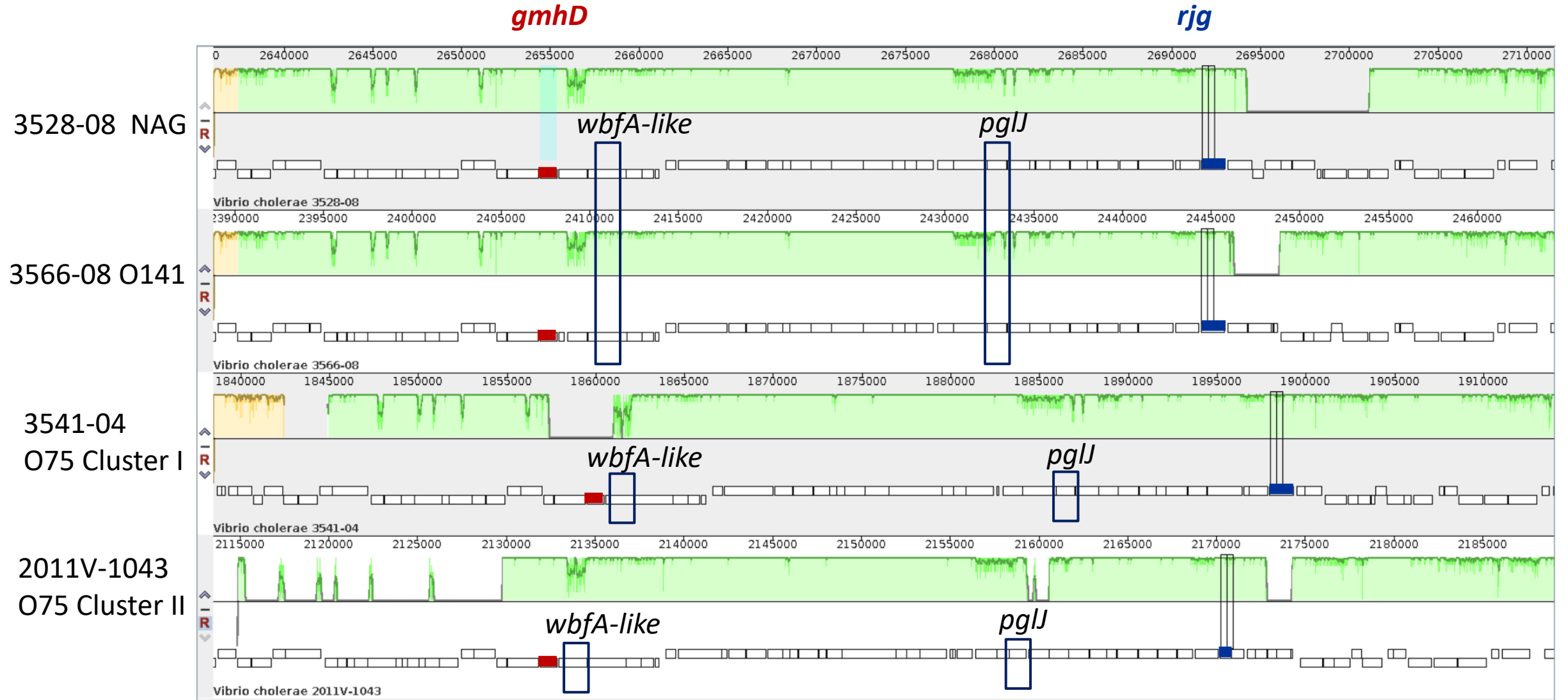


FIG S3. Nucleotide alignment of the *wbfA*-like gene (1518 bp) from the O141 reference strain (3566-08) compared to a sequence from the putative O-antigen gene of the NAG strain (3528-08). Mutations in the NAG O-antigen gene occur at positions 964 bp (single base insertion of a C nucleotide), 1002 bp (C>T), and at 1036 bp (insertion of 483 bp). “.” = indicates identical bases and “-” indicates an indel.

3566-08	ATG	CAT	AAA	CCA	ACC	ATT	TCT	AGT	GTA	ATC	GCA	CTT	ACC	CTG	TTA	GGC	TGC	GGC	GGT	GGA	GAA	AGC	GGC	AAT	TCG	GGC	AAC	ACA	ACA	CCA	[90]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 90]
3566-08	CCG	GTT	AAG	TAC	TTT	AAT	GTA	AGC	TTT	TTG	GAT	TTA	GAC	AAT	ATA	GCT	ATC	AAT	ACA	CAA	ACT	AAC	TGT	CAA	ATC	TTT	GGT	TAT	AAC	GAA	[180]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 180]
3566-08	GAT	CAA	ACT	AAA	AAG	ATC	GTG	GCA	TAT	CGC	TCT	GCC	CCT	GAA	AAT	AAT	TAT	CAA	ATT	GTT	GTT	CAT	GAT	GAA	CAT	GGA	AAT	TTT	GTT	CGT	[270]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 270]
3566-08	CGT	TAT	AGT	AAT	AGC	ACT	GAA	ACG	AAT	GGT	CTA	AGC	TCA	ACT	TTC	CGT	TTT	CGA	CAA	AGT	GAT	GTC	CCA	CAA	AAT	GGA	TAT	GTA	AGT	TTT	[360]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 360]
3566-08	GTC	TAC	TCA	GAA	GGT	AGA	GAT	AAT	TTT	GTA	AGT	ACA	TAT	TCT	AAA	GAT	TTC	ATT	CCA	GAA	AGT	TTT	TCT	ATC	TAC	GCC	AAA	AAT	AAA	AAT	[450]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 450]
3566-08	AAT	AAC	TCT	AAC	TGT	TTA	TCT	ATA	GGT	TCC	GGC	AAT	AAT	AGC	AAC	CCG	CAA	ACA	AGT	GAT	TAC	AAG	TCA	TTT	ATT	CAC	ATC	CCT	GAT	GAA	[540]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 540]
3566-08	AAT	AAA	CTT	TTC	TTT	TTC	TCA	CTC	AAT	CAC	TTT	AAT	CAG	TTA	TCC	TTC	GAG	CCC	ACT	AAT	AAA	CTA	GGT	AGA	GAT	GTA	TCT	GTG	AAT	TCT	[630]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 630]
3566-08	AGA	AGG	GGG	AGA	CCA	CTA	TTA	TTA	ACC	GCT	TAT	GAG	CGA	ACA	AAT	CAG	GAC	GTT	ATA	CAA	AAT	CTT	TTT	AGC	TTT	AAA	TTT	AGA	GCT	ACC	[720]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 720]
3566-08	AAT	GCA	TTA	GGA	AGC	CTT	GGG	CAA	GAA	ATT	GAC	CTT	GAT	ATT	ATT	GAT	CAA	AGA	GAC	ACT	CCA	TGG	ACT	GTA	CCT	TCT	GAT	GTA	GAG	TTA	[810]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 810]
3566-08	TCA	TCA	GCT	CAA	CTA	TTT	GTT	GAT	GGA	AAG	CAA	TTT	AAT	GCT	CCT	TAT	GCT	TAT	TTA	TGG	CAA	TCA	TTA	AAT	ACA	TCT	TCT	GAA	GAT	AAA	[900]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	[ 900]
3566-08	TAT	AGT	TAC	TCA	AAC	TTA	ATC	AAT	GTA	GAT	AAC	TAT	TAC	TTA	AAA	CTA	AAA	GGA	AAA	GAA	ATT	-CC	CCC	CCA	TCA	TCC	CCT	TAT	TGG	AAA	[990]	
3528-08	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	-C	...	...	...	...	...	...	...	...	[ 990]
3566-08	TTT	CAA	CAT	GT C	TCA	AGA	GGG	ACA	AGT	TCA	ATT	ACT	AGC	CAT	TTA	A-	---	---	---	---	---	---	---	---	---	---	---	---	---	---	[1080]	
3528-08	...	...	...	..T	...	...	...	...	...	...	...	...	...	...	...	..GT	GCT	GAA	AAT	ATT	CTA	GAT	GGC	TTT	CCT	AAT	CCA	GAG	CCA	CCA	[1080]
3566-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	[1170]
3528-08	ACA	TTG	GGG	ATA	TGT	AAT	GAT	CAC	AAC	AAT	ACA	CAA	TGT	ATT	AAA	ATT	ACT	CAT	ACT	CAA	AAA	ACC	GAT	AAT	ACA	ATT	CTA	AGG	TTA	CTG	[1170]	
3566-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	[1260]
3528-08	ATT	GAT	TCA	GAA	TTA	ACT	GTA	CCC	AGC	GGA	TTG	CCC	ATA	TTT	ATA	AAA	CAA	ACT	ATC	TAT	AGC	CCA	TAT	CAT	AAC	GAG	CTA	CCT	GTT	ATG	[1260]	
3566-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	[1350]
3528-08	AAA	TTT	GAT	AGT	CCA	ATC	TTA	GAT	CAA	GAA	CTA	AAA	GAG	ATT	AAA	GAT	TTT	TCA	GTT	TCT	TGG	ATA	AAA	ACA	CCG	TCA	AGT	TCT	ATA	ACA	[1350]	
3566-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	[1440]
3528-08	GAA	ACT	TTT	TTA	TAT	CAA	TAT	CAA	GAT	CTC	TAT	AAG	CGA	ACT	CTG	GGC	TCT	GAA	CTA	ATT	GAT	CCT	TCT	ATA	GAT	AAC	ATC	CCA	CTC	CTA	[1440]	
3566-08	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	[1518]
3528-08	AAA	AAC	ATC	TCT	GCC	CAG	CAA	GAT	CAA	CAA	GAC	TTG	CTG	AAA	CGC	CAA	CCT	TAT	ACG	TGG	GTA	TGG	TTA	GAA	GAA	TAA	---	---	---	---	[1518]	

FIG S4. Nucleotide alignment of the *pglJ* gene (1098 bp) from the O141 reference strain (3566-08) compared to a sequence from the putative O-antigen gene of the NAG strain (3528-08). Mutations in the NAG O-antigen gene occur at positions 1031 bp (T>C) and 1085 bp (T>C). “.” = indicates identical bases and “-;” indicates an indel.

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3566-08 GTG GAT GTA GTA AGA AAT AAA ATA ACC CTT TTC ATC AGC TCT CTC GCT GGT GGT GGT AGT GAA GGT GTC TGT GTT AAC GTC GCT AAT GGT [ 90]
3528-08 ... .. [ 90]

3566-08 TTG GCT GAT CAT GGT TGG CAA GTT GAT TTG GTT GTT TTA CAC ACT AAT AAT TCA GCT TAT TTA AAG CGC GTA AGT CAC AAA GTA AAC TTA [ 180]
3528-08 ... .. [ 180]

3566-08 GTC GTG TTG GGG GTT GAC CAT GCT CGC CAT GCA CCG TTG CCA TTA TTA CGC TAT ATC CGT CAG CAT AAA CCT GAA AAA ATG CTC GTA TTT [ 270]
3528-08 ... .. [ 270]

3566-08 AAT TAC GAG TTA GCG GTG TTA GCG GTT ATG TTG CGT AGT TTA TTT CGT TTT AAA ACT AAA ATT ATT GCC AGA AAT ATT AAT ACT TTT TCA [ 360]
3528-08 ... .. [ 360]

3566-08 AAA AAC ACA ACT CAG CCA CAA GGG ATC TGG CAA CGT TAT ATT GTT ACA CCT TTG ATT AAC CAT TTT TAT GGT AAA TGT GAC CAT ATA ATC [ 450]
3528-08 ... .. [ 450]

3566-08 AAC CAA TGC CAA GCG ATG CGC GAT GAC TTA ATC TCA GTA TTT CCC AAT TTG GCG GAT AAA ACT AGC GTG ATT TAT AAT CCA GTC GCA AAG [ 540]
3528-08 ... .. [ 540]

3566-08 CAC GTT GAA GAT TAT GCA AAA GCG TAC GAT TTA ACC CAA GTG GAA AAA CAA GAT TAC TTG CTT TGT GTC GGA AGG TTA GAA AAA CAA AAA [ 630]
3528-08 ... .. [ 630]

3566-08 GCC TTT CAC TAT GCC ATC GAG GGC TTT GCC GGC ATT GCC AAT GAT TTT CCA ACC CTA CGG CTA AAA ATT GTC GGA CAA GGA AGT TTA GAG [ 720]
3528-08 ... .. [ 720]

3566-08 CAG TCA CTA AAG CAA TGC GCA CAG GAT TTG GGT GTT GCC GAT AGG GTT GAT TTT GAA GGT TTT CAA GCG GAT ATG ATC CCT TAT TAT CTT [ 810]
3528-08 ... .. [ 810]

3566-08 CAT GCA AAA GCC ACA TTA CTC ACT TCA CTT TAT GAA GGT TTC CCA AAC GTA TTG ATA GAA TCC ATC ACC TTA GGC ACT CCT GTG GTT GCG [ 900]
3528-08 ... .. [ 900]

3566-08 TTT GAC TGC CCA AGT GGC CCG AGA GAA ATT ATT CAA GAG GGA GTG AAT GGG TAT TTG GCT GAT TAT CAG TTA GTA GCT TCT TTA GAG AGA [ 990]
3528-08 ... .. [ 990]

3566-08 AAA TGT AGA CTA GTT TTG GAG GAT AAA ATA GAT AAT GTT TTA GTT CGA GCT TCA GCA AGT GGT TAT CAA GTG GCT ACA TTT ATA TTA TCT [1080]
3528-08 ... .. [1080]

3566-08 TTA ATA AAA GTT ATA TAA [1098]
3528-08 ... .c. [1098]

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