

TABLE S1. Genes that are transcribed at a higher level in *V. cholerae* O1 classical biotype. Differentially expressed genes were determined using SAM software using ≥ 2.0 fold change in gene expression and False Discovery Rate (FDR) ≤ 0.01 as a criteria.

Gene ID / Main Cellular Roles		Fold Change
Amino Acid Biosynthesis		
VC0390	5-methyltetrahydrofolate--homocysteine methyltransferase <i>metH</i>	2.92
VC1061	cysteine synthase/cystathionine beta-synthase family protein	2.16
VC1174	anthranilate synthase component I <i>trpE</i>	2.29
VC2316	N-acetylglutamate synthase <i>argA</i>	2.86
VC2683	cystathionine gamma-synthase <i>metB</i>	3.41
VC2684	aspartokinase II/homoserine dehydrogenase_ methionine-sensitive <i>metL</i>	2.26
VC2685	5_10-methylenetetrahydrofolate reductase <i>metF</i>	2.41
Biosynthesis of Cofactors, Prosthetic Groups and Carriers		
VC0061	thiamin biosynthesis protein ThiC <i>thiC</i>	4.82
VC0064	thiS protein <i>thiS</i>	4.37
VC0065	thiG protein <i>thiG</i>	2.36
VC0638	dihydropteroate synthase <i>folP</i>	3.14
VC1024	molybdenum cofactor biosynthesis protein A <i>moaA</i>	3.21
VC1025	molybdenum cofactor biosynthesis protein B <i>moaB</i>	2.08
VC1026	molybdenum cofactor biosynthesis protein C <i>moaC</i>	2.51
VC1027	molybdenum cofactor biosynthesis protein D <i>moaD</i>	2.34
VC1028	molybdenum cofactor biosynthesis protein E <i>moaE</i>	2.40
VC1237	nicotinate-nucleotide--dimethylbenzimidazole phosphoribosyltransferase <i>cobT</i>	2.07
VC1296	phosphomethylpyrimidine kinase <i>thiD</i>	2.23
VC1526	molybdopterin-guanine dinucleotide biosynthesis protein A <i>mobA</i>	2.03
VCA0723	3-hydroxy-3-methylglutaryl CoA reductase <i>hmgA</i>	2.81
Cell Envelope		
VC0858	type IV pilin_ putative	3.49
VC2632	fimbrial assembly protein PilO_ putative	4.45
VCA0144	immunogenic protein	4.97
Cellular Processes: Cell Division		
VC0418	maf protein <i>maf</i>	2.62
VC1714	cell division protein MukB <i>mukB</i>	2.77
VC2397	cell division protein FtsZ <i>ftsZ</i>	2.57
Cellular Processes: Chemotaxis and Motility		
VC1130	DNA-binding protein VicH <i>vicH</i>	4.63
VC1289	methyl-accepting chemotaxis protein	2.58
VC1313	methyl-accepting chemotaxis protein	2.14
VC2601	sodium-type flagellar protein MotX <i>motX</i>	2.06
VCA0068	methyl-accepting chemotaxis protein	2.71
Cellular Processes: Pathogenesis		
VC0820	ToxR-activated gene A protein <i>tagA</i>	2.00
VC0825	toxin co-regulated pilus biosynthesis protein I <i>tcpI</i>	8.64
VC0826	toxin co-regulated pilus biosynthesis protein P <i>tcpP</i>	3.84
VC0827	toxin co-regulated pilus biosynthesis protein H <i>tcpH</i>	3.95
VC0830	toxin co-regulated pilus biosynthesis protein Q <i>tcpQ</i>	19.85
VC0831	toxin co-regulated pilus biosynthesis outer membrane protein C <i>tcpC</i>	8.02

VC0832	toxin co-regulated pilus biosynthesis protein R <i>tcpR</i>	19.36
VC0833	toxin co-regulated pilus biosynthesis protein D <i>tcpD</i>	33.89
VC0834	toxin co-regulated pilus biosynthesis protein S <i>tcpS</i>	25.03
VC0835	toxin co-regulated pilus biosynthesis protein T <i>tcpT</i>	15.87
VC0836	toxin co-regulated pilus biosynthesis protein E <i>tcpE</i>	8.90
VC0837	toxin co-regulated pilus biosynthesis protein F <i>tcpF</i>	7.68
VC0838	TCP pilus virulence regulatory protein <i>tcpN/toxT</i>	7.29
VC0839	leader peptidase TcpJ <i>tcpJ</i>	4.81
VC0840	accessory colonization factor AcfB <i>acfB</i>	4.95
VC0841	accessory colonization factor AcfC <i>acfC</i>	4.09
VC0843	tagE protein <i>tagE-1</i>	3.59
VC0844	accessory colonization factor AcfA <i>acfA</i>	9.08
VC1456	cholera enterotoxin_ B subunit <i>ctxB</i>	3.59
VC1457	cholera enterotoxin_ A subunit <i>ctxA</i>	3.69
VCA0218	thermolabile hemolysin	3.61
VCA0646	conserved hypothetical protein/hemolysin_ putative	2.16

Cellular Processes: Other

VC2145	tyrA protein	2.93
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Central Intermediary Metabolism

VC0606	nitrogen regulatory protein P-II <i>glnB-1</i>	4.21
VC1623	carboxynorspermidine decarboxylase <i>nspC</i>	4.68
VC1625	aminotransferase_ class III/decarboxylase_ group II_ authentic frameshift	4.68
VC1945	FAD monooxygenase_ PheA/TfdB family	2.36
VCA0102	CbbY family protein	2.10
VCA0402	acetyltransferase_ putative	2.18
VCA0496	glutathione S-transferase_ putative	2.05
VCA0605	aminotransferase_ class III	2.83

DNA Metabolism

VC0345	DNA mismatch repair protein MutL <i>mutL</i>	2.30
VC0371	replicative DNA helicase <i>dnaB</i>	2.07
VC0397	single-strand binding protein <i>ssb</i>	2.33
VC1846	Holliday junction DNA helicase RuvA <i>ruvA</i>	2.35
VC1847	crossover junction endodeoxyribonuclease RuvC <i>ruvC</i>	2.25
VC2015	DNA polymerase III_ delta prime subunit <i>holB</i>	2.06
VC2245	DNA polymerase III_ alpha subunit <i>dnaE</i>	2.43
VCA0198	site-specific DNA-methyltransferase_ putative	3.17

Energy Metabolism

VC0786	D-amino acid dehydrogenase_ small subunit <i>dada</i>	4.21
VC0804	ferredoxin	2.53
VC0819	aldehyde dehydrogenase <i>aldA-1</i>	4.57
VC1073	chitinase_ putative	2.01
VC1097	phosphate acetyltransferase <i>pta</i>	2.09
VC1300	L-serine dehydratase 1 <i>sdaA-1</i>	2.36
VC1512	formate dehydrogenase_ iron-sulfur subunit <i>fdhB</i>	2.55
VC1616	glutaredoxin_ putative	3.75
VC1693	cytochrome c-type protein TorC <i>torC</i>	2.19
VC1844	cytochrome d ubiquinol oxidase_ subunit I <i>cydA-1</i>	2.07
VC1890	NADH dehydrogenase <i>ndh</i>	2.19
VC1952	chitinase <i>chiA-1</i>	5.24
VC2603	asparaginase_ putative	2.02

VC2698	aspartate ammonia-lyase <i>aspA</i>	3.57
VCA0007	3-hydroxyisobutyrate dehydrogenase_ putative	2.08
VCA0161	tryptophanase <i>tnaA</i>	5.74
VCA0241	hexulose-6-phosphate isomerase SgbU_ putative	2.91
VCA0242	hexulose-6-phosphate synthase SgbH_ putative	2.01
VCA0655	sucrose-6-phosphate dehydrogenase <i>cscA</i>	2.25
VCA0811	chitinase_ putative	9.17
VCA0896	glucose-6-phosphate 1-dehydrogenase <i>zwf</i>	2.37
VCA0897	devB protein <i>devB</i>	2.29

Fatty Acid and Phospholipid Metabolism

VC0745	inositol monophosphate family protein	2.06
VC2022	malonyl CoA-acyl carrier protein transacylase <i>fabD</i>	2.46
VC2023	3-oxoacyl-(acyl-carrier-protein) synthase III <i>fabH-1</i>	3.66
VC2024	fatty acid/phospholipid synthesis protein PlsX <i>plsX</i>	3.06
VC2249	(3R)-hydroxymyristoyl-(acyl-carrier-protein) dehydratase <i>fabZ</i>	2.17

Mobile and Extrachromosomal Element Functions

VC0846	integrase_ degenerate	2.35
VC0870	IS1004 transposase <i>tnpA</i>	2.54
VCA0493	IS1004 transposase <i>tnpA</i>	2.06

Protein Fate

VC0018	16 kDa heat shock protein A <i>ibpA</i>	2.01
VC0958	apolipoprotein N-acyltransferase <i>cutE</i>	2.50
VC2674	protease HslVU_ ATPase subunit HslU <i>hslU</i>	2.03
VCA0533	tatA protein <i>tatA-2</i>	3.23
VCA0820	chaperonin_ 60 Kd subunit <i>groEL-2</i>	3.45

Protein Synthesis

VC0645	tRNA pseudouridine 55 synthase <i>truB</i>	4.96
VC0709	ribosomal large subunit pseudouridine synthase D <i>rluD</i>	2.46
VC1668	pseudouridine synthase Rlu family protein	2.51
VC2281	ribosomal protein S6 modification protein <i>rimK</i>	2.05
VCA0104	ribosomal large subunit pseudouridine synthase A <i>rluA-2</i>	3.15
VCA0289	ribosomal protein L35 <i>rplI</i>	2.67
VCA0627	rRNA methylase_ putative	2.21

Purine, Pyrimidines, Nucleosides, Nucleotides

VC0276	phosphoribosylaminoimidazolecarboxamide formyltransferase/IMP cyclohydrolase <i>purH</i>	2.00
VC0767	inosine-5-monophosphate dehydrogenase <i>guaB</i>	2.02
VC1004	amidophosphoribosyltransferase <i>purF</i>	2.12
VC1491	dihydroorotate dehydrogenase <i>pyrD</i>	2.22
VC2389	carbamoyl-phosphate synthase_ large subunit <i>carB</i>	2.32
VC2510	aspartate carbamoyltransferase_ catalytic subunit <i>pyrB</i>	2.33
VC2511	aspartate carbamoyltransferase_ regulatory subunit <i>pyrI</i>	2.19

Regulatory Functions

VC0072	sensory box/GGDEF family protein	2.50
VC0278	transcriptional activator CadC_ putative	2.15
VC0290	factor-for-inversion stimulation protein <i>fis</i>	2.90
VC1222	integration host factor_ alpha subunit <i>himA</i>	2.87
VC1286	transcriptional regulator_ LacI family	2.34
VC1651	response regulator VieB <i>vieB</i>	6.70
VC1652	response regulator VieA <i>vieA</i>	4.95

VC1653	sensory box sensor histidine kinase/response regulator VieS <i>vieS</i>	5.45
VC1713	transcriptional regulator_ AsnC family	2.40
VC2485	transcriptional regulator_ LysR family	2.01
VC2749	nitrogen regulation protein NR(I) <i>ntrC</i>	3.62
VCA0532	DNA-binding response regulator	2.04
VCA0850	response regulator	2.17
VCA0952	transcriptional regulator_ LuxR family, <i>vpsT</i>	3.23

Transcription

VC0328	DNA-directed RNA polymerase_ beta subunit <i>rpoB</i>	2.46
VC0329	DNA-directed RNA polymerase_ beta subunit <i>rpoC</i>	2.32
VC0644	ribosome-binding factor A <i>rbfA</i>	4.46
VCA0061	ATP-dependent RNA helicase_ DEAD box family	3.70

Transport and Binding Proteins

VC0008	amino acid ABC transporter_ ATP-binding protein	3.08
VC0156	vitamin B12 receptor <i>btuB</i>	7.49
VC0201	iron(III) ABC transporter_ ATP-binding protein	2.71
VC0481	LysE/YggA family protein	3.03
VC0906	ABC transporter_ permease protein	2.73
VC0907	ABC transporter_ ATP-binding protein	2.01
VC0972	porin_ putative	2.83
VC1042	long-chain fatty acid transport protein <i>fadL-1</i>	2.81
VC1655	magnesium transporter <i>mgtE-1</i>	5.42
VC1824	PTS system_ nitrogen regulatory IIA component_ putative	2.05
VC1826	PTS system_ fructose-specific IIABC component <i>fruA-1</i>	2.13
VC1929	C4-dicarboxylate-binding periplasmic protein <i>dctP-2</i>	4.33
VC2283	sodium-dependent transporter	2.38
VC2531	PTS system_ nitrogen regulatory IIA component <i>ptsN</i>	2.32
VCA0036	sodium/dicarboxylate symporter	4.74
VCA0193	Na ⁺ /H ⁺ antiporter_ putative	3.91
VCA0214	multidrug resistance protein D <i>emrD-2</i>	6.69
VCA0454	sulfate-binding protein_ authentic frameshift	4.28
VCA0943	maltose ABC transporter_ permease protein <i>malG</i>	2.35

Unkown Function

VC0050	DNA topoisomerase I-related protein	2.29
VC0060	crcB protein <i>crcB</i>	2.11
VC0255	rfbT-related protein	4.63
VC0258	rfbT protein <i>rfbT</i>	5.96
VC0291	NifR3/Smm1 family protein	2.50
VC0437	GTP1/Obg family protein	2.30
VC0447	DnaJ-related protein	2.80
VC0658	c-di-GMP phosphodiesterase A-related protein	3.01
VC2042	histone deacetylase/AcuC/AphA family protein	2.18
VCA0148	TagA-related protein	6.30

Hypothetical Proteins

VC0037	conserved hypothetical protein	2.84
VC0073	conserved hypothetical protein	3.04
VC0106	conserved hypothetical protein	3.09
VC0191	conserved hypothetical protein	5.38
VC0254	conserved hypothetical protein	3.57
VC0264	conserved hypothetical protein	2.19

VC0271	conserved hypothetical protein	2.43
VC0351	conserved hypothetical protein	2.36
VC0438	conserved hypothetical protein	2.46
VC0467	conserved hypothetical protein	2.21
VC0635	conserved hypothetical protein	2.22
VC0710	conserved hypothetical protein	2.76
VC0842	conserved hypothetical protein	2.61
VC0876	conserved hypothetical protein	4.55
VC1105	conserved hypothetical protein	2.50
VC1131	conserved hypothetical protein	3.23
VC1587	conserved hypothetical protein	6.21
VC1624	conserved hypothetical protein	3.10
VC1723	conserved hypothetical protein	3.39
VC2101	conserved hypothetical protein	2.93
VC2113	conserved hypothetical protein	2.81
VC2115	conserved hypothetical protein	2.58
VC2532	conserved hypothetical protein	2.63
VC2610	conserved hypothetical protein	2.90
VC2620	conserved hypothetical protein	2.08
VC2647	conserved hypothetical protein	5.20
VC2736	conserved hypothetical protein	2.52
VCA0091	conserved hypothetical protein	2.77
VCA0107	conserved hypothetical protein	2.13
VCA0243	conserved hypothetical protein	3.19
VCA0640	conserved hypothetical protein	4.96
VCA0641	conserved hypothetical protein	2.46
VCA0703	conserved hypothetical protein	2.68
VCA0753	conserved hypothetical protein	3.35
VCA0769	conserved hypothetical protein	2.66
VCA0927	conserved hypothetical protein	3.31
VCA1004	conserved hypothetical protein	2.38
VCA1072	conserved hypothetical protein	2.02
VC0074	hypothetical protein	4.58
VC0292	hypothetical protein	2.23
VC0427	hypothetical protein	3.41
VC0511	hypothetical protein	2.52
VC0546	hypothetical protein	6.85
VC0865	hypothetical protein	2.33
VC0877	hypothetical protein	3.41
VC0895	hypothetical protein	6.90
VC1035	hypothetical protein	2.76
VC1078	hypothetical protein	2.97
VC1152	hypothetical protein	5.45
VC1191	hypothetical protein	2.03
VC1192	hypothetical protein	2.44
VC1221	hypothetical protein	2.74
VC1223	hypothetical protein	3.48
VC1262	hypothetical protein	12.10
VC1418	hypothetical protein	2.50
VC1419	hypothetical protein	2.02

VC1420	hypothetical protein	2.26
VC1514	hypothetical protein	2.44
VC1517	hypothetical protein	2.62
VC1724	hypothetical protein	3.29
VC1729	hypothetical protein	2.41
VC1946	hypothetical protein	5.98
VC1981	hypothetical protein	2.16
VC1988	hypothetical protein	2.00
VC2212	hypothetical protein	12.83
VC2280	hypothetical protein	3.10
VC2306	hypothetical protein	3.28
VC2486	hypothetical protein	2.13
VC2494	hypothetical protein	2.15
VC2609	hypothetical protein	2.25
VC2667	hypothetical protein	2.15
VC2687	hypothetical protein	2.04
VC2743	hypothetical protein	2.56
VC2747	hypothetical protein	2.53
VCA0020	hypothetical protein	2.61
VCA0021	hypothetical protein	2.23
VCA0033	hypothetical protein	2.02
VCA0067	hypothetical protein	3.02
VCA0162	hypothetical protein	3.81
VCA0196	hypothetical protein	4.43
VCA0236	hypothetical protein	2.48
VCA0252	hypothetical protein	2.51
VCA0272	hypothetical protein	2.77
VCA0292	hypothetical protein	2.25
VCA0342	hypothetical protein	5.99
VCA0373	hypothetical protein	7.06
VCA0434	hypothetical protein	2.62
VCA0453	hypothetical protein	11.95
VCA0547	hypothetical protein	2.84
VCA0609	hypothetical protein	2.42
VCA0648	hypothetical protein	2.34
VCA0650	hypothetical protein	2.21
VCA0701	hypothetical protein	2.59
VCA0721	hypothetical protein	2.36
VCA0735	hypothetical protein	2.17
VCA0771	hypothetical protein	2.54
VCA0821	hypothetical protein	2.28
VCA0845	hypothetical protein	2.01
VCA0899	hypothetical protein	2.40
VCA0916	hypothetical protein	2.93
VCA0959	hypothetical protein	4.87
VCA0971	hypothetical protein	2.03
VCA1070	hypothetical protein	7.36
VCA1103	hypothetical protein	5.37