Supplementary Table 1. Sequences of oligonucleotides primes used in this study. Restriction sites are indicated by underlines.

Name	DNA sequence (5'-3')
tcpA_del_A	CATGCCATGGTTCTTGTGCCTGCTGAGAAC
tcpA_del_B	TTCCTGGTGCTCCCTCTTGACCGGTTTTCTT
tcpA_del_C	TCAAGAGGGAGCACCAGGAAGTGCCAACT
tcpA_del_D	GCTCTAGAGTGAGAATTCAAACTGACTCCCAAA
tcpP_del_A	CATGCCATGGTTCTTGTGCCTGCTGAGAAC
tcpP_del_B	CTGATGTTGAGCATTCATTCCACCAAAGGT
tcpP_del_C	GAATGAATGCTCAACATCAGTGTTCCGTGA
tcpP_del_D	CTAGTCTAGACTACGTGATCTGGTGCGACA
flaA_lacZ_5'	CCGGAATTCGAATACGGCCAAACTGCATC
flaA_lacZ_3'	CGCGGATCCGGTTGTTCGGCAATAAAGGA
ctxA_lacZ_5'	CCGGAATTCTTTACAGGGGGAAATGATGC
ctxA_lacZ_3'	CGCGGATCCGAGGTCTAGAATCTGCCCGATA
tcpA_lacZ_5'	CCGGAATTCCGCTCCTCCACAGTCAAAGT
tcpA_lacZ_3'	CGCGGATCCCACACCCATAATACCCAGAACA
tcpP_lacZ_5'	CCGGAATTCAACGTAATGATGCACGCAAG
tcpP_lacZ_3'	CGCGGATCCCAATCAGCCTTTCTGGCTTC
toxT_lacZ_5'	CCGGAATTCTCCACATGCAGAAACAGGAG
toxT_lacZ_3'	CGCGGATCCTTGCAATTCCACTATCTATCCAGA
VCA0785_pBAD_A	CCGCTCGAGAATGGCACCGATCCTTTCACAC
VCA0785_pBAD_D	GCTCTAGATACGCCAGAGCGTGGCTTTCGAG
VCA0785_AAL_B	CGGATGCTTCCAACGCAACAATGCGGCAGCACCGACCCAGCGC
VCA0785_AAL_C	GCGCTGGGTCGGTGCTGCCGCATTGTTGCGTTGGAAGCATCCG

Supplementary Table 1. Functional categories of the genes differentially regulated in the RΔ*cdgC* mutant compared to the rugose wild type during the exponential and stationary phases.[a]

Category[b]	Exponential		Stationary	
	Induced	Repressed	Induced	Repressed
Amino Acid Biosynthesis	2	21	8	0
Biosynthesis of Cofactors, Prosthetic Groups and Carriers	0	2	3	1
Cell Envelope	3	4	12	0
Cellular Processes	11	40	15	1
Central Intermediary Metabolism	3	11	6	0
DNA Metabolism	3	2	4	0
Energy Metabolism	12	52	25	0
Fatty Acid and Phospholipid Metabolism	1	6	4	0
Hypothetical Proteins	74	105	77	5
Protein Fate	7	4	15	0
Protein Synthesis	2	1	2	4
Purines, Pyrimidines, Nucleosides and Nucleotides	8	15	9	0
Regulatory Functions	11	12	10	0
Transcription	2	0	4	0
Transport and Binding Proteins	18	35	12	1
Unknown Function	5	12	11	2
Other Categories	5	1	7	0
Total	167	323	224	14

[a]Differentially expressed genes were determined using SAM software with ≥ 1.5 fold change in gene expression and False Discovery Rate (FDR) ≤3% as criteria.
[b]Categories are as defined in the TIGR database for *Vibrio cholerae* strain N16961

Supplementary Table 3. Genes that are differentially expressed in RΔ*cdgC* compared to wild-type rugose during both exponential and stationary phases of growth. Differentially expressed genes were determined using SAM software with ≥ 1.5 fold change in gene expression and False Discovery Rate (FDR) ≤ 3% as a criteria.

Gene ID	Exponential	Stationary
VC0004	-	1.82
VC0005	1.60	-
VC0006	1.67	-
VC0010	1.72	-
VC0025	0.58	1.66
VC0026	-	1.61
VC0034	-	3.21
VC0038	0.67	-
VC0040	-	0.57
VC0050	1.64	-
VC0051	0.52	-
VC0052	0.62	-
VC0075	-	0.58
VC0076	0.53	-
VC0086	-	1.56
VC0102	0.47	-
VC0105	-	2.08
VC0112	0.56	-
VC0130	0.62	-
VC0134	-	1.56
VC0151	0.64	-
VC0157	2.81	3.02
VC0162	0.52	1.53
VC0168	-	1.79
VC0170	0.52	-
VC0171	0.22	-
VC0172	0.21	-
VC0173	0.46	-
VC0175	0.54	1.98
VC0176	-	1.67
VC0193	1.83	-
VC0206	-	2.24
VC0254	1.55	-
VC0261	1.53	-
VC0273	1.52	-
VC0274	2.58	-
VC0276	0.56	-
VC0278	1.70	-
VC0290	1.87	-
VC0291	1.96	-
VC0292	1.89	-
VC0295	-	1.51
VC0296	-	1.51
VC0307	-	1.70
VC0328	-	2.42
VC0330	0.50	-
VC0345	-	1.89
VC0347	0.63	-
VC0348	-	1.85
VC0349	-	2.41
VC0354	-	3.34
VC0363	1.60	-
VC0391	0.57	-
VC0395	-	1.93
VC0402	0.61	-
VC0423	0.32	-
VC0430	-	1.76
VC0432	0.44	-
VC0443	1.57	-
VC0446	-	1.79
VC0448	1.71	-
VC0451	1.53	-
VC0452	1.61	-
VC0453	1.53	-
VC0465	0.53	-
VC0475	0.57	-
VC0481	0.62	-
VC0483	-	1.73
VC0485	-	1.69
VC0487	1.68	2.40
VC0490	0.55	1.65
VC0491	0.59	2.33
VC0492	-	2.16
VC0506	2.19	-
VC0507	1.67	-
VC0519	2.20	-
VC0520	1.72	-
VC0533	0.42	-
VC0542	-	1.71
VC0543	-	2.23
VC0548	0.66	-
VC0549	0.37	-
VC0551	0.60	-
VC0557	0.58	-

Gene ID	Exponential	Stationary
VC0558	-	2.42
VC0566	-	2.18
VC0571	-	0.43
VC0578	-	2.26
VC0583	0.38	-
VC0604	0.35	-
VC0608	0.65	-
VC0626	-	1.91
VC0628	0.35	-
VC0629	0.52	-
VC0633	0.64	1.84
VC0635	2.06	-
VC0642	-	1.62
VC0648	-	1.67
VC0658	1.59	-
VC0667	0.50	-
VC0678	-	1.52
VC0679	1.68	0.41
VC0706	0.52	-
VC0708	1.86	-
VC0730	0.56	-
VC0731	-	2.79
VC0733	0.33	-
VC0737	0.67	-
VC0749	-	1.66
VC0756	-	1.84
VC0763	-	1.62
VC0786	0.56	1.93
VC0804	1.79	-
VC0824	-	1.70
VC0826	1.62	1.69
VC0827	1.52	-
VC0828	0.53	1.99
VC0844	-	1.79
VC0847	-	1.99
VC0851	1.58	-
VC0855	-	1.86
VC0857	0.54	-
VC0869	0.27	-
VC0883	0.35	-
VC0895	0.49	-
VC0905	0.46	1.95
VC0916	1.55	2.93
VC0917	-	2.02
VC0918	-	2.59
VC0919	-	2.28
VC0921	1.51	-

Gene ID	Exponential	Stationary
VC0922	-	2.97
VC0924	-	1.99
VC0925	-	2.74
VC0926	-	4.09
VC0928	-	3.84
VC0929	-	2.09
VC0930	1.96	4.06
VC0931	1.76	-
VC0932	1.50	5.17
VC0933	1.62	5.55
VC0935	1.92	7.81
VC0936	1.92	2.20
VC0937	1.87	-
VC0938	1.50	-
VC0939	1.94	-
VC0941	0.50	2.23
VC0942	-	1.53
VC0947	1.56	-
VC0953	-	1.91
VC0957	0.58	-
VC0961	-	1.93
VC0965	-	2.39
VC0972	1.88	-
VC0973	-	2.10
VC0975	0.54	-
VC0976	0.56	1.58
VC0977	-	1.68
VC0983	-	1.83
VC0985	-	1.76
VC0991	0.11	-
VC0996	-	2.12
VC1000	-	1.85
VC1004	0.49	-
VC1008	0.56	-
VC1010	-	1.67
VC1022	-	1.53
VC1034	2.16	-
VC1044	-	2.24
VC1046	0.60	-
VC1047	0.61	-
VC1048	-	1.56
VC1051	1.72	-
VC1052	2.31	-
VC1061	0.20	-
VC1064	-	1.77
VC1080	0.33	-
VC1081	0.56	-

Gene ID	Exponential	Stationary
VC1082	0.51	-
VC1091	0.24	3.15
VC1092	0.31	-
VC1093	0.33	-
VC1094	0.24	-
VC1095	0.21	-
VC1119	0.53	-
VC1126	-	2.29
VC1129	1.52	-
VC1137	0.63	-
VC1139	0.63	-
VC1141	0.35	-
VC1142	0.22	-
VC1148	-	1.51
VC1149	-	1.90
VC1150	0.58	1.92
VC1151	0.67	-
VC1158	-	1.56
VC1168	0.56	-
VC1169	-	1.84
VC1183	0.62	-
VC1184	0.64	-
VC1190	0.37	1.54
VC1191	0.54	1.65
VC1194	0.47	-
VC1195	-	1.78
VC1197	-	2.05
VC1198	0.49	-
VC1205	2.09	-
VC1211	1.91	-
VC1223	2.16	-
VC1228	0.46	-
VC1231	4.56	-
VC1242	0.54	-
VC1249	0.46	-
VC1256	-	1.88
VC1261	-	0.52
VC1277	0.61	-
VC1281	0.65	-
VC1293	0.29	1.58
VC1297	-	2.07
VC1300	1.90	-
VC1301	-	2.15
VC1313	1.77	-
VC1317	1.51	-
VC1329	2.99	-
VC1331	1.51	-

Gene ID	Exponential	Stationary
VC1357	2.60	-
VC1368	0.67	-
VC1384	0.59	1.50
VC1413	0.21	-
VC1414	0.42	-
VC1415	0.40	2.56
VC1416	0.59	-
VC1417	-	1.95
VC1418	1.83	-
VC1419	1.54	-
VC1420	1.91	-
VC1421	0.56	-
VC1422	1.88	-
VC1424	-	1.93
VC1428	-	1.92
VC1439	0.61	-
VC1440	0.60	-
VC1441	0.59	-
VC1442	0.58	-
VC1447	1.75	-
VC1448	1.89	-
VC1449	2.31	-
VC1450	2.56	-
VC1451	1.70	-
VC1470	-	1.74
VC1490	-	1.81
VC1492	0.64	-
VC1494	0.57	-
VC1509	0.58	-
VC1510	0.63	-
VC1512	0.66	-
VC1514	0.53	-
VC1538	0.63	-
VC1539	0.63	-
VC1548	-	1.53
VC1559	0.55	-
VC1567	1.60	-
VC1573	1.99	-
VC1575	1.71	-
VC1576	1.88	-
VC1579	1.55	-
VC1585	-	4.28
VC1586	1.79	-
VC1587	-	3.19
VC1589	0.45	-
VC1590	0.50	-
VC1591	0.53	-

Gene ID	Exponential	Stationary
VC1598	2.01	-
VC1599	0.43	-
VC1600	-	1.55
VC1611	0.63	-
VC1620	.30	-
VC1633	-	1.59
VC1644	1.81	-
VC1645	-	1.60
VC1649	2.06	-
VC1655	2.02	-
VC1658	1.89	-
VC1669	1.59	-
VC1671	0.63	1.90
VC1672	1.92	-
VC1690	0.43	-
VC1696	-	1.64
VC1699	0.47	-
VC1701	1.95	2.23
VC1722	1.83	-
VC1725	1.65	-
VC1727	0.52	-
VC1738	-	1.76
VC1739	-	2.18
VC1742	1.61	-
VC1748	2.01	-
VC1749	1.75	-
VC1754	0.56	-
VC1778	0.54	-
VC1779	0.39	-
VC1781	0.66	-
VC1820	0.27	-
VC1821	0.22	-
VC1823	-	1.52
VC1827	0.18	-
VC1828	0.50	-
VC1829	1.63	-
VC1834	-	1.82
VC1836	-	1.75
VC1838	1.66	1.51
VC1841	1.86	0.65
VC1844	1.54	-
VC1859	0.33	-
VC1860	-	3.35
VC1861	0.36	-
VC1862	0.26	-
VC1863	0.38	1.56
VC1864	0.46	-

Gene ID	Exponential	Stationary
VC1866	-	1.57
VC1869	-	1.66
VC1872	0.30	-
VC1874	0.42	-
VC1887	-	1.53
VC1888	1.81	2.81
VC1892	0.56	1.56
VC1898	0.58	-
VC1905	0.32	-
VC1911	-	1.92
VC1915	-	0.36
VC1916	1.62	-
VC1918	-	1.77
VC1920	-	1.87
VC1922	-	1.59
VC1935	1.90	-
VC1936	1.87	-
VC1937	1.92	2.11
VC1943	0.56	-
VC1945	-	1.74
VC1946	3.08	-
VC1947	2.41	2.27
VC1956	-	1.55
VC1957	-	1.56
VC1962	1.95	2.52
VC1965	-	1.54
VC1973	-	2.03
VC1977	1.58	-
VC1983	0.45	-
VC1993	0.65	-
VC2002	0.30	1.74
VC2006	-	1.59
VC2010	0.54	-
VC2011	0.66	-
VC2021	-	1.69
VC2030	-	1.63
VC2033	0.61	-
VC2036	0.55	-
VC2037	1.59	1.56
VC2039	-	1.71
VC2040	-	1.52
VC2046	0.46	-
VC2049	-	1.66
VC2059	0.62	-
VC2062	0.48	-
VC2063	0.51	-
VC2064	0.55	-

Gene ID	Exponential	Stationary
VC2067	0.62	-
VC2068	0.33	-
VC2069	0.58	-
VC2074	-	1.86
VC2084	0.26	2.01
VC2085	0.33	-
VC2086	0.36	1.82
VC2087	0.44	-
VC2088	0.45	-
VC2089	0.49	-
VC2090	0.50	-
VC2091	0.54	-
VC2092	0.33	1.90
VC2106	1.50	1.65
VC2114	0.66	-
VC2116	-	1.78
VC2129	0.58	-
VC2130	0.66	-
VC2131	0.58	-
VC2132	0.65	-
VC2133	0.55	-
VC2134	0.43	1.69
VC2136	0.64	-
VC2138	0.37	-
VC2139	0.45	-
VC2141	0.28	-
VC2142	0.15	-
VC2143	0.15	-
VC2144	0.21	-
VC2146	1.59	-
VC2149	0.40	-
VC2152	0.66	-
VC2157	0.65	1.65
VC2161	0.25	-
VC2168	-	1.70
VC2183	0.59	1.61
VC2187	0.22	-
VC2188	0.24	-
VC2189	0.08	-
VC2191	0.34	-
VC2195	0.33	-
VC2196	0.50	-
VC2197	0.25	-
VC2198	0.36	-
VC2199	0.48	-
VC2200	0.20	-
VC2206	0.43	-

Gene ID	Exponential	Stationary
VC2207	0.33	-
VC2212	2.82	-
VC2216	0.54	-
VC2221	0.32	-
VC2226	0.47	-
VC2227	0.50	-
VC2253	1.58	-
VC2282	0.65	-
VC2348	1.70	-
VC2349	1.70	-
VC2350	1.72	-
VC2357	0.50	-
VC2361	0.53	-
VC2362	-	1.58
VC2367	0.63	1.79
VC2368	-	2.02
VC2372	0.61	-
VC2374	0.22	-
VC2376	0.56	-
VC2386	-	2.80
VC2389	0.34	-
VC2390	0.44	2.13
VC2391	0.64	-
VC2412	-	2.46
VC2414	-	1.54
VC2443	1.63	1.56
VC2466	-	2.33
VC2472	-	2.12
VC2481	0.35	-
VC2497	-	1.98
VC2509	0.42	-
VC2510	0.26	1.99
VC2511	0.29	-
VC2512	-	1.91
VC2527	-	1.58
VC2530	0.55	-
VC2535	-	1.69
VC2543	0.40	-
VC2544	0.40	-
VC2546	0.55	-
VC2548	-	1.95
VC2607	-	1.78
VC2613	0.54	-
VC2614	0.64	2.32
VC2615	0.41	-
VC2616	0.52	2.20
VC2617	0.44	-

Gene ID	Exponential	Stationary
VC2618	0.32	-
VC2629	1.62	-
VC2647	2.56	-
VC2648	1.67	-
VC2650	1.67	-
VC2653	-	1.86
VC2654	-	1.71
VC2662	-	2.21
VC2664	-	2.25
VC2665	-	3.00
VC2667	1.97	2.35
VC2669	-	2.08
VC2675	-	1.63
VC2681	1.80	1.73
VC2698	1.96	-
VC2709	1.75	-
VC2717	0.31	-
VC2727	1.51	-
VC2728	1.68	-
VC2729	1.89	-
VC2730	1.85	-
VC2731	1.65	-
VC2738	0.54	2.27
VC2746	0.42	-
VC2747	0.64	-
VC2751	1.50	-
VC2761	2.23	-
VC2764	0.65	-
VC2765	-	1.62
VC2767	0.63	2.23
VCA0012	0.38	-
VCA0013	0.49	-
VCA0014	0.24	-
VCA0016	0.49	-
VCA0017	0.39	2.23
VCA0022	0.57	-
VCA0030	-	2.18
VCA0037	0.55	1.87
VCA0048	1.53	-
VCA0068	2.21	-
VCA0078	0.32	-
VCA0079	-	1.73
VCA0089	-	0.63
VCA0100	0.60	-
VCA0107	0.65	-
VCA0108	0.59	-
VCA0109	0.59	-

Gene ID	Exponential	Stationary
VCA0112	0.50	-
VCA0114	0.65	-
VCA0124	-	2.00
VCA0125	-	1.79
VCA0130	0.55	-
VCA0136	0.54	-
VCA0139	9.34	1.72
VCA0166	-	1.92
VCA0167	-	1.97
VCA0172	1.65	-
VCA0179	2.19	-
VCA0184	1.62	-
VCA0194	-	0.66
VCA0208	-	0.54
VCA0214	0.53	-
VCA0218	1.78	-
VCA0219	1.73	-
VCA0223	0.27	-
VCA0224	0.57	-
VCA0227	-	2.47
VCA0239	1.51	-
VCA0242	2.19	-
VCA0243	1.72	-
VCA0249	0.60	-
VCA0254	1.55	-
VCA0272	1.60	-
VCA0274	-	1.87
VCA0276	0.50	-
VCA0277	0.22	-
VCA0278	0.45	-
VCA0280	0.35	-
VCA0290	-	0.41
VCA0298	0.57	-
VCA0303	0.44	-
VCA0308	0.56	-
VCA0328	0.53	-
VCA0332	-	1.71
VCA0346	0.37	-
VCA0355	0.65	-
VCA0363	0.63	-
VCA0367	0.51	-
VCA0368	0.56	-
VCA0375	0.65	-
VCA0392	-	1.51
VCA0395	0.66	-
VCA0397	0.64	-
VCA0398	0.52	-

Gene ID	Exponential	Stationary
VCA0399	0.63	-
VCA0410	0.63	1.55
VCA0433	-	2.13
VCA0436	0.65	-
VCA0439	-	2.04
VCA0441	0.54	-
VCA0446	0.59	-
VCA0447	-	2.15
VCA0448	-	1.78
VCA0450	0.65	-
VCA0455	0.42	-
VCA0463	0.54	-
VCA0464	0.45	-
VCA0465	0.41	-
VCA0516	14.71	-
VCA0517	3.47	-
VCA0518	5.20	-
VCA0519	3.00	-
VCA0523	0.62	-
VCA0536	0.21	-
VCA0563	0.63	-
VCA0565	1.54	-
VCA0569	0.65	-
VCA0573	-	2.35
VCA0577	1.84	-
VCA0592	0.58	-
VCA0597	1.66	-
VCA0609	0.46	-
VCA0611	1.90	2.72
VCA0612	2.00	2.98
VCA0623	1.72	-
VCA0631	0.46	-
VCA0632	0.59	-
VCA0643	0.41	-
VCA0645	1.54	-
VCA0653	1.71	-
VCA0662	1.63	-
VCA0663	0.66	-
VCA0688	0.60	-
VCA0689	0.52	-
VCA0690	0.47	-
VCA0691	0.47	-
VCA0697	0.37	-
VCA0711	-	1.53
VCA0712	-	0.56
VCA0721	1.52	1.61
VCA0722	2.05	-

Gene ID	Exponential	Stationary
VCA0735	1.58	-
VCA0744	0.53	-
VCA0759	0.45	-
VCA0765	-	1.51
VCA0796	-	1.52
VCA0800	-	1.94
VCA0801	1.91	-
VCA0826	0.47	-
VCA0827	0.58	-
VCA0828	-	2.29
VCA0843	0.34	-
VCA0849	-	1.76
VCA0851	0.53	-
VCA0860	0.17	-
VCA0864	1.83	-
VCA0868	0.51	-
VCA0875	0.26	-
VCA0877	0.45	-
VCA0883	0.32	-
VCA0885	0.52	-
VCA0886	0.42	1.57
VCA0896	0.66	-
VCA0897	0.60	-
VCA0899	-	0.66
VCA0916	2.75	-
VCA0917	2.64	-
VCA0918	2.75	1.72
VCA0925	0.61	-
VCA0933	1.51	-
VCA0943	0.33	-
VCA0944	0.61	-
VCA0945	0.15	-
VCA0946	0.47	-
VCA0952	1.94	4.47
VCA0958	0.53	-
VCA0959	1.63	-
VCA0962	1.73	-
VCA0978	0.63	-
VCA0994	0.36	-
VCA1000	1.99	-
VCA1025	-	2.03
VCA1027	0.47	-
VCA1028	0.19	-
VCA1030	1.75	-
VCA1031	2.13	-
VCA1050	-	1.68
VCA1065	0.66	-

Gene ID	Exponential	Stationary
VCA1070	1.90	-
VCA1071	0.65	-
VCA1072	0.65	-
VCA1073	0.56	-
VCA1075	0.28	-
VCA1076	0.25	-
VCA1082	-	1.65
VCA1083	-	1.73
VCA1085	0.64	-
VCA1097	0.66	-
VCA1113	0.63	-

Supplementary Table 4. Functional categories of the genes differentially regulated in the SΔ*cdgC* mutant compared to the smooth wild type during exponential and stationary phases.[a]

Category	Exponential	
	Induced	Repressed
Amino Acid Biosynthesis	0	0
Biosynthesis of Cofactors, Prosthetic Groups and Carriers	1	0
Cell Envelope	8	0
Cellular Processes	7	10
Central Intermediary Metabolism	4	0
DNA Metabolism	0	0
Energy Metabolism	8	0
Fatty Acid and Phospholipid Metabolism	1	0
Hypothetical Proteins	19	9
Protein Fate	2	0
Protein Synthesis	0	0
Purines, Pyrimidines, Nucleosides and Nucleotides	2	0
Regulatory Functions	6	1
Transcription	0	1
Transport and Binding Proteins	7	0
Unknown Function	2	2
Other Categories	4	0
Total	71	23

[a]Differentially expressed genes were determined using SAM software with ≥ 1.5 fold change in gene expression and False Discovery Rate (FDR) ≤3% as a criteria.
[b]Categories are as defined in the TIGR database for *Vibrio cholerae* strain N16961

Supplementary Table 5. Genes that are differentially expressed in SΔ*cdgC* compared to wild-type smooth during both exponential and stationary phases of growth. Differentially expressed genes were determined using SAM software with ≥ 1.5 fold change in gene expression and False Discovery Rate (FDR) ≤ 3% as a criteria.

Gene ID	**Exponential**
VC0010	2.16
VC0157	2.49
VC0175	0.64
VC0184	0.48
VC0194	1.80
VC0284	1.57
VC0385	1.63
VC0430	1.51
VC0492	0.60
VC0665	2.13
VC0704	1.52
VC0767	1.54
VC0825	0.63
VC0828	0.57
VC0830	0.58
VC0831	0.65
VC0832	0.66
VC0833	0.59
VC0835	0.64
VC0838	0.61
VC0839	0.66
VC0916	2.03
VC0917	2.63
VC0918	3.10
VC0919	2.63
VC0920	1.54
VC0922	1.99
VC0924	2.26
VC0925	2.28
VC0926	2.73
VC0927	2.32
VC0928	2.42
VC0930	2.76
VC0931	3.37
VC0932	4.99
VC0933	4.61
VC0935	4.88
VC0936	4.94
VC0937	2.86
VC1080	0.56
VC1185	0.64
VC1235	1.59
VC1313	1.52
VC1538	0.64
VC1584	1.66
VC1585	1.86
VC1620	0.64
VC1644	1.61
VC1760	0.65
VC1762	0.59
VC1827	1.81
VC1888	4.84
VC1905	1.54
VC1935	2.35
VC1949	1.82
VC2006	0.64
VC2615	1.89
VC2667	1.52
VC2724	1.57
VC2725	1.50
VC2747	1.57
VC2749	1.92
VC2751	1.51
VCA0013	1.59
VCA0014	2.32
VCA0017	1.55
VCA0035	1.53
VCA0055	1.65
VCA0075	1.78
VCA0114	1.64
VCA0218	1.90
VCA0219	2.31
VCA0231	1.53
VCA0238	1.55
VCA0276	1.73
VCA0375	0.61
VCA0390	0.66
VCA0645	1.89
VCA0685	2.04
VCA0697	0.61
VCA0721	1.62
VCA0811	1.58
VCA0843	1.66
VCA0849	2.13
VCA0864	1.60
VCA0875	2.11
VCA0887	1.50
VCA0888	1.65
VCA0943	1.78
VCA0944	1.80
VCA0952	2.59
VCA0962	1.58
VCA1069	1.67
VCA1075	0.64
Gene ID	**Stationary**
VC1468	0.66
VC1636	0.64
VC1814	0.58
VC2287	0.62

Supplementary Table 6. Functional categories of the genes differentially regulated in the RΔ*mbaA* mutant compared to the rugose wild type during exponential and stationary phases of growth.[a]

Category[b]	Exponential		Stationary	
	Induced	Repressed	Induced	Repressed
Amino Acid Biosynthesis	0	9	7	0
Biosynthesis of Cofactors, Prosthetic Groups and Carriers	0	2	0	0
Cell Envelope	0	1	6	0
Cellular Processes	4	11	4	4
Central Intermediary Metabolism	1	1	5	0
DNA Metabolism	1	0	1	0
Energy Metabolism	3	18	9	0
Fatty Acid and Phospholipid Metabolism	0	1	0	0
Hypothetical Proteins	33	28	45	4
Protein Fate	1	1	9	0
Protein Synthesis	1	1	1	0
Purines, Pyrimidines, Nucleosides and Nucleotides	3	11	1	0
Regulatory Functions	8	9	6	0
Transcription	0	0	0	0
Transport and Binding Proteins	10	20	7	0
Unknown Function	3	6	7	0
Other Categories	5	0	4	0
Total	73	119	112	8

[a]Differentially expressed genes were determined using SAM software with ≥ 1.5 fold change in gene expression and False Discovery Rate (FDR) ≤3% as a criteria.
[b]Categories are as defined in the TIGR database for *Vibrio cholerae* strain N16961

Supplementary Table 7. Genes that are differentially expressed in RΔ*mbaA* compared to wild-type rugose during both exponential and stationary phases of growth. Differentially expressed genes were determined using SAM software with ≥ 1.5 fold change in gene expression and False Discovery Rate (FDR) ≤ 3% as a criteria.

Gene ID	Exponential	Stationary
VC0016	-	8.56
VC0017	-	4.02
VC0018	-	2.01
VC0025	-	7.41
VC0030	-	1.90
VC0036	0.65	-
VC0051	0.62	-
VC0052	0.63	-
VC0076	0.48	-
VC0157	-	4.38
VC0170	0.64	-
VC0171	0.39	1.89
VC0172	0.34	-
VC0176	1.71	-
VC0177	1.73	-
VC0185	1.89	-
VC0258	-	1.64
VC0273	1.70	-
VC0278	1.75	-
VC0330	0.57	-
VC0346	-	2.10
VC0349	-	2.31
VC0363	1.60	-
VC0364	2.18	-
VC0378	-	1.72
VC0431	-	1.53
VC0432	0.57	-
VC0465	0.48	-
VC0475	0.66	-
VC0481	0.46	-
VC0551	0.54	-
VC0553	-	1.55
VC0583	0.62	-
VC0604	0.51	-
VC0635	1.99	-
VC0667	0.53	-
VC0702	0.48	-
VC0707	2.39	-
VC0714	-	1.74
VC0715	-	1.64
VC0730	0.57	-
VC0731	0.62	-

Gene ID	Exponential	Stationary
VC0749	0.66	1.76
VC0784	-	2.23
VC0786	-	3.48
VC0827	-	1.62
VC0832	1.68	-
VC0838	1.61	-
VC0854	-	1.58
VC0869	0.65	-
VC0905	0.64	-
VC0916	-	2.53
VC0917	-	1.90
VC0918	-	3.54
VC0919	-	3.25
VC0922	-	3.83
VC0924	-	2.07
VC0925	-	3.61
VC0926	-	4.40
VC0928	-	4.73
VC0929	-	2.44
VC0930	-	3.39
VC0932	-	4.22
VC0933	-	4.24
VC0935	-	5.14
VC0936	-	1.82
VC0942	-	1.54
VC0961	-	1.92
VC0991	0.16	-
VC1004	0.58	-
VC1031	-	2.68
VC1034	1.63	-
VC1048	-	1.61
VC1051	1.61	-
VC1080	0.49	-
VC1082	0.57	-
VC1091	0.34	3.24
VC1095	0.31	-
VC1101	-	1.76
VC1141	0.48	-
VC1143	-	1.83
VC1150	0.61	-
VC1168	0.60	-
VC1172	-	1.56

Gene ID	Exponential	Stationary
VC1175	0.47	-
VC1183	-	2.77
VC1190	0.57	-
VC1193	1.59	-
VC1197	-	1.84
VC1206	-	1.60
VC1231	2.26	-
VC1242	0.59	-
VC1247	1.52	-
VC1277	0.53	-
VC1293	0.51	-
VC1313	-	1.69
VC1317	1.52	-
VC1329	1.87	-
VC1344	-	4.54
VC1345	-	4.82
VC1346	-	4.31
VC1347	-	2.44
VC1358	-	2.00
VC1409	1.69	-
VC1415	0.56	-
VC1421	0.55	-
VC1455	1.51	-
VC1466	1.52	-
VC1470	1.52	1.62
VC1477	1.61	-
VC1490	-	1.96
VC1494	0.66	-
VC1510	0.60	-
VC1514	0.62	-
VC1620	0.51	-
VC1621	-	2.25
VC1622	-	2.26
VC1633	-	1.78
VC1645	0.55	-
VC1677	-	1.88
VC1690	0.66	-
VC1699	0.57	-
VC1727	-	1.92
VC1737	1.69	-
VC1742	1.65	-
VC1823	0.59	-
VC1860	-	1.91
VC1861	0.48	-
VC1863	-	1.87
VC1888	-	5.10
VC1898	0.54	-

Gene ID	Exponential	Stationary
VC1911	0.59	-
VC1942	0.65	-
VC1943	0.64	-
VC1947	-	2.14
VC1962	-	1.94
VC2002	0.44	-
VC2012	-	3.47
VC2045	0.62	-
VC2078	1.84	-
VC2079	-	1.77
VC2084	0.49	-
VC2085	0.56	-
VC2086	0.63	-
VC2088	0.62	-
VC2092	0.44	-
VC2101	1.83	-
VC2106	-	1.68
VC2114	0.62	-
VC2141	0.66	-
VC2142	0.62	-
VC2143	-	0.36
VC2159	0.58	-
VC2161	0.62	-
VC2187	0.65	0.24
VC2188	-	0.37
VC2189	-	0.29
VC2200	-	0.54
VC2216	0.64	-
VC2226	0.62	-
VC2227	0.66	-
VC2228	-	1.76
VC2326	1.50	-
VC2362	-	1.93
VC2364	-	1.62
VC2374	0.41	-
VC2376	0.65	-
VC2481	0.62	-
VC2482	-	1.72
VC2483	-	1.72
VC2509	0.62	-
VC2510	0.60	-
VC2511	0.63	-
VC2530	0.64	-
VC2544	0.63	-
VC2607	-	2.03
VC2614	0.64	-
VC2616	-	3.52

Gene ID	Exponential	Stationary
VC2618	-	2.43
VC2647	1.70	-
VC2650	1.72	-
VC2665	-	2.59
VC2717	0.63	0.42
VC2725	-	1.65
VC2730	-	1.82
VC2746	0.59	-
VC2756	1.55	-
VC2761	1.62	-
VCA0001	-	1.79
VCA0012	0.48	-
VCA0017	0.59	-
VCA0022	0.64	-
VCA0078	-	2.06
VCA0080	-	2.28
VCA0124	-	1.94
VCA0125	1.62	1.59
VCA0139	2.56	-
VCA0167	-	1.66
VCA0172	1.54	-
VCA0177	1.75	-
VCA0184	1.82	-
VCA0203	1.54	-
VCA0214	0.47	-
VCA0220	-	2.48
VCA0223	-	2.81
VCA0274	-	1.88
VCA0280	0.47	-
VCA0332	-	1.91
VCA0333	-	1.94
VCA0469	-	1.60
VCA0475	1.55	-
VCA0497	-	1.55
VCA0516	2.35	-
VCA0517	1.60	-
VCA0519	1.56	-
VCA0531	1.80	-
VCA0536	0.48	-

Gene ID	Exponential	Stationary
VCA0555	1.74	-
VCA0570	1.66	1.94
VCA0571	1.54	1.97
VCA0597	1.63	-
VCA0611	-	2.38
VCA0612	-	2.65
VCA0616	0.64	-
VCA0648	-	2.52
VCA0650	-	1.72
VCA0742	1.86	-
VCA0750	1.60	-
VCA0783	-	1.59
VCA0794	1.70	-
VCA0796	2.57	1.50
VCA0801	1.80	-
VCA0812	-	2.55
VCA0813	-	5.74
VCA0828	-	4.63
VCA0829	-	3.22
VCA0840	-	1.56
VCA0843	0.60	-
VCA0845	-	1.60
VCA0849	-	2.50
VCA0880	-	4.42
VCA0881	-	2.63
VCA0883	0.48	-
VCA0886	0.56	-
VCA0899	-	0.59
VCA0934	1.80	-
VCA0952	2.01	5.15
VCA0959	1.53	-
VCA0975	-	1.80
VCA1000	-	0.43
VCA1035	0.61	-
VCA1075	0.59	-
VCA1076	0.55	-
VCA1082	-	1.95
VCA1083	-	2.11