

Supplementary Table S2 | Table detailing KOs used for the prediction of targeted metabolic functions.

Function	KEGG Pathway	KEGG Enzyme	KEGG Genes	KEGG Orthologs (KO)
Carbon fixation by prokaryotic organisms	map00720	-	-	-
Carbon fixation by photosynthetic organisms	map00710	-	-	-
Photosynthesis	map00195	-	-	-
Denitrification	-	EC :1.7.99.4	<i>narGHI</i>	K0370-74
		EC :1.9.6.1	<i>napAB</i>	K02567-68
		EC :1.7.2.1	<i>nirKS</i>	K15864/K00368
		EC :1.7.2.5	<i>norBC</i>	K04561/K02305
		EC :1.7.2.4	<i>nosZ</i>	K00376
Nitrification	-	EC :1.4.99.39	<i>amoCAB</i>	K10944-46
		EC :1.7.3.4	<i>hao</i>	K10535
Nitrogen fixation	-	EC :1.18.6.1	<i>nifDKH</i>	K00531
			<i>anfG</i>	K02586
				K02588
				K02591
Phosphate utilization (organic)	-	EC:3.6.1.11	<i>ppx</i>	K01524
Sulfate reduction (dissimilatory and assimilatory)	-	EC:2.7.7.4	<i>sat</i>	K00958
		EC:2.7.7.4	<i>cysND</i>	K00956-57
		EC:2.7.1.25	<i>PAPSS</i>	
		EC:2.7.1.25	<i>cysC</i>	K00860
		EC:1.8.4.8	<i>cysH</i>	K00390
		EC :1.8.1.2	<i>cysπ</i>	K00380-81
		EC :1.8.7.1	<i>sir</i>	K00392
		EC :1.8.99.2	<i>aprAB</i>	K00394-95
		EC :1.8.99.3	<i>dsrAB</i>	K11180-81
Methanogenesis	-	EC :1.2.99.5	<i>fwdABCDEFGH</i>	K00200-05
		EC :2.3.1.101	<i>ptr</i>	K00672
		EC :1.5.99.9	<i>mta</i>	K00319
		EC :1.2.98.2	<i>hmd</i>	K13942
		EC :2.1.1.86	<i>mtrABCDEFGH</i>	K00577-84
		EC :2.8.4.1	<i>mcrABG</i>	K00399/K00401-02
		EC :1.8.98.1	<i>hdrA2B2C2</i>	K03388-90
		EC :1.8.98.1	<i>hdrD</i>	K08264
Methane oxidation	-	EC :1.1.2.7	<i>Mdh12</i>	K14028-29
		EC :1.14.13.25	<i>mmoXYZBCD</i>	K16157-61
		EC :1.1.2.7	<i>mxgJGACKLD</i>	K16254-60