

Supplementary File 6. Spectral count (S.c.) statistics for proteins involved in central metabolism of *Methylobacillus flagellatus*

Gene name (Mfla identifier)	Protein/ function	S.c. ratio MA/ Me (log2)	S.c. Sum (log2)	Raw counts MA	Raw counts Me
<i>Methanol oxidation</i>					
<i>mxoF</i> (mfla_2044)	MDH large subunit	0.527	12.931	2885	2837
<i>mxoJ</i> (mfla_2043)	essential for MDH function	0.290	9.510	252	297
<i>mxoG</i> (mfla_2042)	cytochrome, electron acceptor from MDH	-0.622	8.679	104	225
<i>mxoI</i> (mfla_2041)	MDH small subunit	2.365	6.763	44	27
<i>mxoR</i> (mfla_2040)	unknown	0.181	9.019	176	222
<i>mxoS</i> (mfla_2039)	unknown	1.882	5.936	30	11
<i>mxoA</i> (mfla_2038)	essential for Ca ²⁺ insertion into MDH	0.347	6.590	35	39
<i>mxoC</i> (mfla_2037)	essential for Ca ²⁺ insertion into MDH	1.057	5.433	20	11
<i>mxoK</i> (mfla_2036)	essential for Ca ²⁺ insertion into MDH	-0.013	5.537	14	21
<i>mxoL</i> (mfla_2035)	essential for Ca ²⁺ insertion into MDH	1.402	5.983	28	15
<i>mxoD</i> (mfla_2034)	unknown	-1.144	8.729	83	263
<i>xoxF</i> (mfla_2314)	MxaF homolog	1.724	6.345	38	16
<i>xoxJ</i> (mfla_2313)	MxaJ homolog	0.639	5.992	24	22
<i>xoxG</i> (mfla_2312)	MxaG homolog	0.733	5.075	12	11
<i>mfla_344</i>	MxaF homolog	3.274	3.763	7	1
<i>mfla_1451</i>	MxaF homolog	-	-	-	-
<i>mfla_1450</i>	MxaG homolog	-	-	-	-
<i>mfla_1717</i>	MxaF homolog	0.418	3.776	4	6
<i>Pyroloquinoline quinone (PQQ) biosynthesis</i>					
<i>pqqA</i> (mfla_0021)	PQQ synthesis	-	-	-	-
<i>pqqB</i> (mfla_1683)	PQQ synthesis	-0.836	5.643	12	27
<i>pqqC</i> (mfla_1682)	PQQ synthesis	-1.249	7.653	43	120
<i>pqqD</i> (mfla_1681)	PQQ synthesis	-0.577	3.852	2	9
<i>pqqE</i> (mfla_1680)	PQQ synthesis	0.008	5.437	13	19
<i>pqqF</i> (mfla_0734)	PQQ synthesis	-0.099	8.708	196	125

<i>pqqG</i> (<i>mfla_0735</i>)	PQQ synthesis	0.687	8.247	114	116
<i>Methylamine oxidation (methylamine dehydrogenase, MADH)</i>					
<i>mauF</i> (<i>mfla_0547</i>)	unknown	-	-	-	-
<i>mauB</i> (<i>mfla_0548</i>)	MADH large subunit	6.529	12.602	3830	59
<i>mauE</i> (<i>mfla_0549</i>)	essential for small subunit maturation	-	4.691	18	-
<i>mauD</i> (<i>mfla_0550</i>)	essential for small subunit maturation	6.716	10.047	671	5
<i>mauA</i> (<i>mfla_0551</i>)	MADH small subunit	-	7.785	140	-
<i>mauG</i> (<i>mfla_0552</i>)	TTQ biosynthesis	-	7.524	115	-
<i>mauL</i> (<i>mfla_0553</i>)	unknown	-	-	-	-
<i>mauM</i> (<i>mfla_0554</i>)	unknown	-	5.720	31	-
<i>mauN</i> (<i>mfla_0555</i>)	unknown	-	3.720	7	-
<i>azu</i> (<i>mfla_0556</i>)	electron acceptor from MADH	4.723	8.239	184	5
<i>Methylamine oxidation (N-methylglutamate pathway)</i>					
<i>mgdA</i> (<i>mfla_0452</i>)	N-methylglutamate DH sub. A	5.132	8.427	19	-
<i>mgdB</i> (<i>mfla_0453</i>)	N-methylglutamate DH sub. B	-	3.621	7	-
<i>mgdC</i> (<i>mfla_0454</i>)	N-methylglutamate DH sub. C	6.159	7.581	112	1
<i>mgdD</i> (<i>mfla_0455</i>)	N-methylglutamate DH sub. D	-	4.302	11	-
<i>gma</i> (<i>mfla_0456</i>)	γ -glutamylmethylamide synthase	4.597	7.451	100	4
<i>mgsA</i> (<i>mfla_0457</i>)	N-methylglutamate synthase sub. A	5.132	8.427	203	4
<i>mgsB</i> (<i>mfla_0458</i>)	N-methylglutamate synthase sub. B	-	6.812	65	-
<i>mgsC</i> (<i>mfla_0459</i>)	N-methylglutamate synthase sub. C	4.429	8.631	226	12
<i>H₄MPT-linked formaldehyde oxidation</i>					
<i>fhcB</i> (<i>mfla_1662</i>)	Fhc, subunit B	-0.140	8.467	106	171
<i>fhcA</i> (<i>mfla_1663</i>)	Fhc, subunit A	0.265	9.594	267	310
<i>fhcD</i> (<i>mfla_1664</i>)	Fhc, subunit D	0.163	8.426	114	148
<i>fhcC</i> (<i>mfla_1665</i>)	Fhc, subunit C	0.624	9.891	365	335
<i>mptG</i> (<i>mfla_1661</i>)	β -RFAP	-1.353	7.980	45	161
<i>mtdB</i> (<i>mfla_1660</i>)	methylene H ₄ MPT dehydrogenase	-0.352	10.703	460	848
<i>orfY</i> (<i>mfla_1659</i>)	unknown	0.171	5.076	13	12

<i>mch</i> (<i>mfla_1658</i>)	methenyl H ₄ MPT cyclohydrolase	-0.888	10.018	234	620
<i>orf5</i> (<i>mfla_1657</i>)	biosynthesis of H ₄ MPT	1.856	3.354	4	3
<i>orf7</i> (<i>mfla_1656</i>)	unknown	-	2.095	-	4
<i>fae</i> (<i>mfla_1652</i>)	formaldehyde activating enzyme	-0.380	11.077	590	1077
<i>fae</i> (<i>mfla_2543</i>)	formaldehyde activating enzyme	-0.725	4.872	7	16
<i>orf17</i> (<i>mfla_1651</i>)	unknown	-	2.095	-	4
<i>orf1</i> (<i>mfla_1650</i>)	unknown	-	1.346	-	2
<i>orf9</i> (<i>mfla_1649</i>)	biosynthesis of H ₄ MPT	-0.399	6.288	22	39
<i>pabB</i> (<i>mfla_1648</i>)	para-aminobenzoate synthase component I	0.016	5.928	19	27
<i>pcbD</i> (<i>mfla_1646</i>)	unknown	-0.749	5.732	12	29
<i>orf21</i> (<i>mfla_1647</i>)	biosynthesis of H ₄ MPT	0.580	7.216	57	47
<i>orf22</i> (<i>mfla_1579</i>)	biosynthesis of H ₄ MPT	-1.153	2.996	1	6
<i>orf19</i> (<i>mfla_1580</i>)	biosynthesis of H ₄ MPT	-	2.600	4	-
<i>orf20</i> (<i>mfla_1581</i>)	biosynthesis of H ₄ MPT	1.440	4.765	12	6
<i>afp</i> (<i>mfla_1582</i>)	dihydromethanopterin reductase	-0.317	5.484	12	22
<i>fae2</i> (<i>mfla_1524</i>)	formaldehyde activating enzyme homolog	-1.629	10.146	176	766
<i>fae3</i> (<i>mfla_2364</i>)	formaldehyde activating enzyme homolog	-0.028	8.321	107	139
Formate oxidation					
<i>Fdh1A</i> (<i>mfla_0720</i>)	FDH1, dehydrogenase alpha subunit	-	6.738	64	-
<i>Fdh1B</i> (<i>mfla_0721</i>)	FDH1, beta subunit	-	6.692	62	-
<i>Fdh1C</i> (<i>mfla_0722</i>)	FDH1, gamma subunit	-	1.398	1	-
<i>Fdh1D</i> (<i>mfla_0719</i>)	FDH1, accessory protein	-	-	-	-
<i>Fdh1E</i> (<i>mfla_0718</i>)	FDH1, delta subunit	-	2.621	3	-
<i>fdh4A</i> (<i>mfla_0338</i>)	FDH4	0.673	6.051	26	22
<i>fdh4B</i> (<i>mfla_0337</i>)	FDH4-associated protein	-	-	-	-
Ribulose monophosphate cycle for formaldehyde assimilation/oxidation					
<i>hps</i> (<i>mfla_1654</i>)	hexulosephosphate synthase	-0.548	12.329	1311	2728
<i>hps</i> (<i>mfla_0250</i>)	hexulosephosphate synthase	-0.274	12.910	2194	3775
<i>hpi</i> (<i>mfla_1653</i>)	hexulosephosphate isomerase	-0.302	9.111	156	284
<i>tal</i> (<i>mfla_1655</i>)	transaldolase	-0.380	11.077	823	1790
<i>pgi</i> (<i>mfla_1325</i>)	glucose 6-phosphate isomerase	-0.566	8.539	95	193
<i>zwf</i> (<i>mfla_0917/1061</i>)	glucose 6-phosphate dehydrogenase	0.106	9.998	332	432

<i>pgl</i> (<i>mfla_0919/1063</i>)	6-phosphogluconolactonase	-1.109	6.040	24	75
<i>gndA</i> (<i>mfla_0918/1062</i>)	6-phosphogluconate dehydrogenase (NAD)	0.173	10.690	617	648
<i>gndB</i> (<i>mfla_2599</i>)	6-phosphogluconate dehydrogenase (NADP)	3.393	7.128	78	10
<i>edd</i> (<i>mfla_0759</i>)	6-phosphogluconate dehydratase	0.271	8.752	147	172
<i>eda</i> (<i>mfla_0760</i>)	2-keto 3-deoxy 6-phosphogluconate aldolase	-0.371	8.239	82	153
<i>tkt</i> (<i>mfla_2249</i>)	transketolase	-0.044	12.657	2082	2925
<i>rpe</i> (<i>mfla_2472</i>)	ribulosephosphate 3-epimerase	-0.472	9.959	264	516

C3 interconversion reactions and partial citric acid cycle

<i>aceE</i> (<i>mfla_2074</i>)	E1 component, pyruvate dehydrogenase	-0.461	9.590	208	400
<i>aceF</i> (<i>mfla_2075</i>)	E2 component, pyruvate dehydrogenase	-0.189	8.038	77	123
<i>lpdA</i> (<i>mfla_2076</i>)	E3 component, pyruvate dehydrogenase	0.018	7.477	57	81
<i>pyk</i> (<i>mfla_2244</i>)	pyruvate kinase	1.139	6.093	29	20
<i>pgk</i> (<i>mfla_2247</i>)	phosphoglycerate kinase	-0.716	7.783	52	124
<i>gpd</i> (<i>mfla_2248</i>)	glyceraldehyde phosphate dehydrogenase	-0.262	78.550	107	183
<i>pps</i> (<i>mfla_2203</i>)	PEP synthase	-0.522	10.770	463	911
<i>pgm</i> (<i>mfla_2188</i>)	phosphoglyceromutase	-0.889	8.618	86	226
<i>eno</i> (<i>mfla_1909</i>)	enolase	-1.035	10.294	269	756
<i>tpi</i> (<i>mfla_2064</i>)	triosephosphate isomerase	0.857	4.064	4	8
<i>acnB</i> (<i>mfla_1817</i>)	aconitate hydratase B	0.015	9.193	189	259
<i>gltA</i> (<i>mfla_0061</i>)	citrate synthase	-0.419	8.248	82	154
<i>idh</i> (<i>mfla_2139</i>)	isocitrate dehydrogenase	0.345	9.509	257	284
<i>sucC</i> (<i>mfla_1888</i>)	succinly-CoA sythase alpha subunit	0.742	7.852	91	72
<i>sucD</i> (<i>mfla_1889</i>)	succinly-CoA sythase beta subunit	-0.243	7.627	57	95

MA, methylamine; Me, methanol; β -RFAP, β -ribofuranosylaminobenzene 5'-phosphate synthase; FDH, formate dehydrogenase.