

**Supplementary Table 1: Different methyltransferases present in *M.tb* proteome**

Sr. No.	Rv No	Function of Gene	Name of Gene
1	Rv0070c	intermediary metabolism and respiration	serine hydroxymethyltransferase
2	Rv0089	intermediary metabolism and respiration	Methyltransferase
3	Rv0145	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
4	Rv0146	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
5	Rv0187	intermediary metabolism and respiration	O-methyltransferase
6	Rv0208c	intermediary metabolism and respiration	tRNA (guanine-N(7)-)-methyltransferase
7	Rv0213c	intermediary metabolism and respiration	Methyltransferase
8	Rv0224c	intermediary metabolism and respiration	Methyltransferase
9	Rv0281	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
10	Rv0294	intermediary metabolism and respiration	trans-aconitate methyltransferase
11	Rv0326	Unknown	hypothetical protein
12	Rv0329c	Conserved hypotheticals prediction based on GO and InterPro: intermediary metabolism and respiration	hypothetical protein
13	Rv0380c	intermediary metabolism and respiration	RNA methyltransferase
14	Rv0447c	lipid metabolism	cyclopropane-fatty-acyl-phospholipid synthase UfaA
15	Rv0469	lipid metabolism	mycolic acid synthase UmaA
16	Rv0470c	lipid metabolism	cyclopropane mycolic acid synthase
17	Rv0503c	lipid metabolism	cyclopropane mycolic acid synthase
18	Rv0511	intermediary metabolism and respiration	uroporphyrin-III C-methyltransferase
19	Rv0520	intermediary metabolism and respiration	possible methyltransferase
20	Rv0521	intermediary metabolism and respiration	possible methyltransferase
21	Rv0558	intermediary metabolism and respiration	demethylmenaquinone methyltransferase
22	Rv0560c	intermediary metabolism and respiration	benzoquinone methyltransferase
23	Rv0567	intermediary metabolism and respiration	Methyltransferase
24	Rv0642c	lipid metabolism	hydroxymycolate synthase MmaA4
25	Rv0643c	lipid metabolism	methoxy mycolic acid synthase MmaA3
26	Rv0644c	lipid metabolism	cyclopropane mycolic acid synthase MmaA2
27	Rv0645c	lipid metabolism	mycolic acid methyltransferase MmaA1
28	Rv0724A	conserved hypotheticals	conserved hypothetical protein
29	Rv0725c	conserved hypotheticals	hypothetical protein
30	Rv0726c	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
31	Rv0731c	lipid metabolism	hypothetical protein
32	Rv0764c	intermediary metabolism and respiration	lanosterol 14- $\alpha$ demethylase
33	Rv0811c	conserved hypotheticals	hypothetical protein

34	Rv0830	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
35	Rv0881	intermediary metabolism and respiration	rRNA/rRNA methyltransferase
36	Rv0893c	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
37	Rv1003	Conserved hypotheticals	rRNA small subunit methyltransferase I
38	Rv1010	information pathways	rRNA small subunit methyltransferase A
39	Rv1093	intermediary metabolism and respiration	serine hydroxymethyltransferase
40	Rv1133c	intermediary metabolism and respiration	5-methyltetrahydropteroyltriglutamate--homocysteine methyltransferase
41	Rv1147	conserved hypotheticals	hypothetical protein
42	Rv1153c	lipid metabolism	O-methyltransferase
43	Rv1216c	cell wall and cell processes	integral membrane protein
44	Rv1220c	intermediary metabolism and respiration	Methyltransferase
45	Rv1300	intermediary metabolism and respiration	release factor glutamine methyltransferase
46	Rv1316c	information pathways	methylated-DNA--protein-cysteine methyltransferase
47	Rv1317c	information pathways	bifunctional regulatory protein/DNA repair enzyme AlkA/Metal binding domain of Ada
48	Rv1377c	intermediary metabolism and respiration	Methyltransferase
49	Rv1403c	intermediary metabolism and respiration	Methyltransferase
50	Rv1405c	intermediary metabolism and respiration	Methyltransferase
51	Rv1407	information pathways	Methyltransferase
52	Rv1498c	intermediary metabolism and respiration	hypothetical protein
53	Rv1506c	Unknown	hypothetical protein
54	Rv1509	Unknown	hypothetical protein
55	Rv1513	conserved	hypothetical protein, 2-O-methyltransferase_Noel
56	Rv1515c	conserved hypotheticals	hypothetical protein
57	Rv1523	intermediary metabolism and respiration	Methyltransferase
58	Rv1597	conserved hypotheticals	hypothetical protein
59	Rv1644	information pathways	23S rRNA methyltransferase TsnR
60	Rv1694	virulence, detoxification, adaptation	16S/23S rRNA (cytidine-2'-O)-methyltransferase TlyA
61	Rv1703c	intermediary metabolism and respiration	Probable catechol-O-methyltransferase
62	Rv1729c	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
63	Rv1889c	conserved hypotheticals	hypothetical protein
64	Rv1896c	conserved hypotheticals	S-adenosyl-L-methionine-dependent methyltransferase
65	Rv1978	conserved hypotheticals	hypothetical protein
66	Rv1988	intermediary metabolism and respiration	23S rRNA methyltransferase
67	Rv2003c	conserved hypotheticals	hypothetical protein
68	Rv2066	intermediary metabolism and respiration	bifunctional S-adenosyl-L-methionine-precorrin-2 methyl transferase/precorrin-3 methylase
69	Rv2067c	conserved hypotheticals	hypothetical protein

70	Rv2071c	intermediary metabolism and respiration	Precorrin-3 methylase CobM
71	Rv2072c	intermediary metabolism and respiration	precorrin-6Y C(5,15)-methyltransferase
72	Rv2118c	intermediary metabolism and respiration	tRNA (adenine(58)-N(1))-methyltransferase
73	Rv2124c	intermediary metabolism and respiration	methionine synthase
74	Rv2165c	conserved hypotheticals	rRNA small subunit methyltransferase H
75	Rv2211c	intermediary metabolism and respiration	Aminomethyltransferase
76	Rv2225	intermediary metabolism and respiration	3-methyl-2-oxobutanoate hydroxymethyltransferase
77	Rv2258c	regulatory proteins	transcriptional regulator
78	Rv2372c	conserved hypotheticals	rRNA small subunit methyltransferase E
79	Rv2423	conserved hypotheticals	hypothetical protein Rv2423
80	Rv2437	cell wall and cell processes	putative protein-S-isoprenylcysteine methyltransferase
81	Rv2458	intermediary metabolism and respiration	homocysteine S-methyltransferase MmuM
82	Rv2492	conserved hypotheticals	hypothetical protein Rv2492
83	Rv2601	intermediary metabolism and respirations	spermidine synthase
84	Rv2622	intermediary metabolism and respirations	Methyltransferase
85	Rv2675c	conserved hypotheticals	hypothetical protein
86	Rv2689c	conserved hypotheticals	hypothetical protein
87	Rv2751	conserved hypotheticals	hypothetical protein
88	Rv2756c	information pathways	type I restriction/modification system DNA methylase HsdM
89	Rv2764c	intermediary metabolism and respirations	thymidylate synthase ThyA
90	Rv2880c/Rv2879c	conserved hypotheticals	Probable dual-specificity RNA methyltransferase
91	Rv2906c	information pathways	tRNA (guanine-N1)-methyltransferase
92	Rv2952	intermediary metabolism and respirations	phthiotriol/phenolphthiotriol dimycocerosates methyltransferase
93	Rv2954c	conserved hypotheticals	hypothetical protein
94	Rv2955c	conserved hypotheticals	hypothetical protein
95	Rv2956	conserved hypotheticals	hypothetical protein
96	Rv2959c	intermediary metabolism and respirations	rhamnosyl O-methyltransferase
97	Rv2966c	intermediary metabolism and respirations	Methyltransferase
98	Rv2990c	conserved hypotheticals	hypothetical protein
99	Rv3015c	conserved hypotheticals	hypothetical protein
100	Rv3024c	information pathways	t-RNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase TrmU
101	Rv3030	conserved hypotheticals	S-adenosylmethionine-dependent methyltransferase
102	Rv3037c	conserved hypotheticals	S-adenosylmethionine-dependent methyltransferase
103	Rv3038c	conserved hypotheticals	hypothetical protein
104	Rv3120	conserved hypotheticals	hypothetical protein
105	Rv3204	information pathways	DNA-methyltransferase
106	Rv3238c	cell wall and cell processes	integral membrane protein
107	Rv3263	information pathways	DNA methylase

108	Rv3322c	intermediary metabolism and respirations	Methyltransferase
109	Rv3342	intermediary metabolism and respirations	Methyltransferase
110	Rv3366	information pathways	tRNA/rRNA methylase SpoU
111	Rv3392c	lipid metabolism	cyclopropane mycolic acid synthase CmaA
112	Rv3399	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
113	Rv3579c	intermediary metabolism and respirations	tRNA/rRNA methyltransferase
114	Rv3699	conserved hypotheticals	Hypothetical protein
115	Rv3701c	conserved hypotheticals	histidine-specific methyltransferase EtgD
116	Rv3720	lipid metabolism	mycolic acid cyclopropane synthetase
117	Rv3729	intermediary metabolism and respirations	putative transferase
118	Rv3767c	lipid metabolism	S-adenosylmethionine-dependent methyltransferase
119	Rv3787c	conserved hypotheticals	S-adenosyl-L-methionine-dependent methyltransferase
120	Rv3832c	conserved hypotheticals	hypothetical protein
121	Rv3919c	cell wall and cell processes	GibD