Supplemental Table S2: Predicted hypoxia-induced changes in biomass composition of wild type *Mycobacterium tuberculosis* H37Rv and the Δ*dosR* deletion mutant.

Normoxic coefficients were set to be the same as the original coefficients of the corresponding metabolites in the biomass function of the *iNJ*661m metabolic network [42]. The hypoxic coefficients were predicted by integrating the metabolic network with gene expression data for the wild type strain (or the Δ*dosR* deletion mutant strain) of *Mycobacterium tuberculosis* H37Rv under hypoxia [25]. Changes in the coefficients indicated an altered biomass composition of *M. tuberculosis* H37Rv upon exposure to hypoxia. "Increase" (or "Decrease") indicated that a predicted hypoxic coefficient was greater (or smaller) than the corresponding normoxic coefficient.

Index	Metabolite name	Normoxic coefficient in biomass	Wild type		Δ*dosR*		Note
			Hypoxic coefficient in biomass	Change in the coefficient	Hypoxic coefficient in biomass	Change in the coefficient	
1	Acyl phosphatidylinositol mannoside	1.7×10^{-3}	5.4×10^{-3}	Increase	6.6×10^{-3}	Increase	Phosphatidylinositol mannosides, cell-wall components [57]
2	Acyl phosphatidylinositol mannoside di-mannose	1.5×10^{-3}	4.7×10^{-3}	Increase	5.8×10^{-3}	Increase	
3	Acyl phosphatidylinositol mannoside tri-mannose	1.3×10^{-3}	4.3×10^{-3}	Increase	5.2×10^{-3}	Increase	
4	Acyl phosphatidylinositol mannoside tetra-mannose	1.2×10^{-3}	3.9×10^{-3}	Increase	4.7×10^{-3}	Increase	
5	Di-acyl phosphatidylinositol mannoside di-mannose	1.3×10^{-3}	4.1×10^{-3}	Increase	5.0×10^{-3}	Increase	
6	Phosphatidylinositol mannoside	2.1×10^{-3}	6.6×10^{-3}	Increase	8.1×10^{-3}	Increase	
7	Phosphatidylinositol mannoside di-mannose	1.8×10^{-3}	5.7×10^{-3}	Increase	7.0×10^{-3}	Increase	
8	Phosphatidylinositol mannoside tri-mannose	1.6×10^{-3}	5.0×10^{-3}	Increase	6.1×10^{-3}	Increase	
9	Phosphatidylinositol mannoside tetra-mannose	1.4×10^{-3}	4.5×10^{-3}	Increase	5.5×10^{-3}	Increase	
10	Phosphatidylinositol mannoside penta-mannose	1.3×10^{-3}	4.1×10^{-3}	Increase	4.9×10^{-3}	Increase	
11	Phosphatidylinositol mannoside hexa-mannose	1.2×10^{-3}	3.7×10^{-3}	Increase	4.5×10^{-3}	Increase	

12	Undecaprenyl-diphospho-N-acetylmuramoyl-N-acetylglucosamine-L-alanyl-D-glutamyl-L-lysyl-D-alanyl-D-alanine	1.0×10^{-3}	2.1×10^{-3}	Increase	2.4×10^{-3}	Increase	Precursors of peptido-glycan, a cell-wall component [56]
13	Undecaprenyl-diphospho-N-acetylmuramoyl-N-acetylglucosamine-L-alanyl-gamma-D-glutamyl-L-lysyl-D-alanyl-D-alanine	1.0×10^{-3}	2.1×10^{-3}	Increase	2.4×10^{-3}	Increase	
14	Undecaprenyl-diphospho-N-acetylmuramoyl-N-acetylglucosamine-L-ala-D-glu-meso-2-6-diaminopimeloyl-D-ala-D-ala	9.9×10^{-4}	2.1×10^{-3}	Increase	2.4×10^{-3}	Increase	
15	Undecaprenyl-diphospho-N-glycolylmuramoyl-N-acetylglucosamine-L-ala-D-glu-meso-2-6-diaminopimeloyl-D-ala-D-ala	9.8×10^{-4}	2.1×10^{-3}	Increase	2.3×10^{-3}	Increase	
16	Peptidoglycan subunit1	1.9×10^{-2}	4.0×10^{-2}	Increase	4.5×10^{-2}	Increase	
17	Peptidoglycan subunit2	1.9×10^{-2}	4.0×10^{-2}	Increase	4.5×10^{-2}	Increase	
18	Keto mycolate (2 cyclopropanated rings)	3.3×10^{-3}	8.2×10^{-3}	Increase	1.1×10^{-2}	Increase	Mycolates and related derivatives, cell-wall components [56]
19	Keto mycolate (1 cyclopropanated ring)	3.3×10^{-3}	8.1×10^{-3}	Increase	5.0×10^{-7}	Decrease	
20	Methoxy mycolate (1 cyclopropanated ring)	3.4×10^{-3}	8.3×10^{-3}	Increase	5.0×10^{-7}	Decrease	
21	Mycolate (2 cyclopropanated rings)	1.1×10^{-2}	2.7×10^{-2}	Increase	3.7×10^{-2}	Increase	
22	Tetramycolyl hexaarabinoside 1	1.1×10^{-3}	2.7×10^{-3}	Increase	3.7×10^{-3}	Increase	
23	Tetramycolyl hexaarabinoside 2	1.1×10^{-3}	2.7×10^{-3}	Increase	3.7×10^{-3}	Increase	
24	Tetramycolyl hexaarabinoside 3	1.1×10^{-3}	2.7×10^{-3}	Increase	3.7×10^{-3}	Increase	
25	Tetramycolyl hexaarabinoside 4	1.1×10^{-3}	2.7×10^{-3}	Increase	1.3×10^{-3}	Increase	

26	Adenosine monophosphate (AMP)	1.4×10^{-1}	1.8×10^{-1}	Increase	1.4×10^{-1}	No change	Nucleotides
27	Guanosine monophosphate (GMP)	2.4×10^{-1}	3.1×10^{-1}	Increase	3.2×10^{-1}	Increase	
28	Deoxyadenosine monophosphate (dAMP)	3.5×10^{-3}	6.1×10^{-3}	Increase	3.5×10^{-3}	No change	
29	Deoxyguanosine monophosphate (dGMP)	6.7×10^{-3}	8.5×10^{-3}	Increase	8.8×10^{-3}	Increase	
30	Deoxythymidine monophosphate (dTMP)	3.7×10^{-3}	6.4×10^{-3}	Increase	3.7×10^{-3}	No change	
31	L-Cysteine	2.2×10^{-2}	1.6×10^{-2}	Decrease	2.2×10^{-2}	No change	Amino acids
32	Glycine	3.4×10^{-1}	5.0×10^{-7}	Decrease	5.0×10^{-7}	Decrease	
33	L-Methionine	3.5×10^{-2}	2.5×10^{-2}	Decrease	3.5×10^{-2}	No change	
34	L-Phenylalanine	4.8×10^{-2}	2.2×10^{-2}	Decrease	2.0×10^{-2}	Decrease	
35	L-Serine	1.4×10^{-1}	1.0×10^{-1}	Decrease	1.4×10^{-1}	No change	
36	L-Tryptophan	2.0×10^{-2}	1.5×10^{-2}	Decrease	2.0×10^{-2}	No change	
37	L-Tyrosine	3.2×10^{-2}	1.4×10^{-2}	Decrease	1.3×10^{-2}	Decrease	
38	5-6-7-8-Tetrahydrofolate	1.0×10^{-6}	1.8×10^{-6}	Increase	2.3×10^{-6}	Increase	Cofactors
39	7-8-Dihydrofolate	1.0×10^{-6}	1.8×10^{-6}	Increase	2.3×10^{-6}	Increase	
40	Menaquinol-8	1.0×10^{-6}	1.9×10^{-6}	Increase	1.0×10^{-6}	No change	
41	Nicotinamide adenine dinucleotide (NAD)	1.0×10^{-6}	2.8×10^{-6}	Increase	3.1×10^{-6}	Increase	
42	Nicotinamide adenine dinucleotide phosphate (NADP)	1.0×10^{-6}	2.8×10^{-6}	Increase	3.1×10^{-6}	Increase	
43	Quinolinate	1.0×10^{-6}	2.8×10^{-6}	Increase	3.1×10^{-6}	Increase	
44	Protoheme	1.0×10^{-6}	2.5×10^{-6}	Increase	3.2×10^{-6}	Increase	
45	Thiamin	1.0×10^{-6}	1.9×10^{-6}	Increase	2.3×10^{-6}	Increase	
46	Hydroxymethylbilane	1.0×10^{-6}	1.9×10^{-6}	Increase	2.6×10^{-6}	Increase	
47	Flavin mononucleotide	1.0×10^{-6}	1.3×10^{-6}	Increase	1.3×10^{-6}	Increase	
48	Riboflavin	1.0×10^{-6}	1.3×10^{-6}	Increase	1.3×10^{-6}	Increase	
49	Pantetheine 4'-phosphate	1.0×10^{-6}	7.2×10^{-7}	Decrease	1.0×10^{-6}	No change	

50	Iron-III-chelated carboxymycobactin-T	1.5×10^{-3}	1.0×10^{-3}	Decrease	1.5×10^{-3}	No change	Other
51	Phenolic glycolipid	1.2×10^{-3}	1.2×10^{-3}	No change	6.6×10^{-4}	Decrease	
52	Phosphatidylethanolamine (dihexadecanoyl, n-C16:0)	4.1×10^{-3}	2.9×10^{-3}	Decrease	4.1×10^{-3}	No change	
53	Phenol phthiocerol dimycocerosate	2.6×10^{-4}	2.6×10^{-4}	No change	1.5×10^{-4}	Decrease	