

Table S1. Genes with expression changes of at least 2.0 fold in *Mycobacterium tuberculosis* H37Rv exposed to Lupulone.

Functional category	ORF no. ^a	gene	Product or putative function	Fold change ^b
Amino acid biosynthesis	Rv3003c	<i>ilvB1</i>	Acetolactate synthase 1 catalytic subunit	-2.12
	Rv2988c	<i>leuC</i>	Isopropylmalate isomerase large subunit	-2.14
	Rv2220	<i>glnA1</i>	Glutamine synthetase GLNA1 %28glutamine synthase%29 %28GS-I%29	2.12
	Rv1885c	-	Chorismate mutase	-2.04
	Rv1296	<i>thrB</i>	Homoserine kinase	-2.02
	Rv1133c	<i>metE</i>	5-methyltetrahydropteroyltriglutamate--ho mocysteine S-methyltransferase	2.01
	Rv0812	-	4-amino-4-deoxychorismate lyase	-2.06
	Rv2335	<i>cysE</i>	Serine acetyltransferase cyse	-2.12
Biosynthesis and degradation of surface polysaccharides and lipopolysaccharides	Rv0051	-	Transmembrane protein	-2.13
	MT2619	-	Putative lipoprotein	-2.12
Biosynthesis of cofactors, prosthetic groups, and carriers	Rv3323c	<i>moaX</i>	MOAD-MOAE fusion protein MOAX	2.05
	Rv2991	-	Hypothetical protein	-2.06
	Rv1485	<i>hemH</i>	Ferrochelatase	-2.04
	Rv0574c	-	Hypothetical protein	2.02
	Rv0573c	-	Nicotinate phosphoribosyltransferase	2.09
	Rv0542c	<i>menE</i>	O-succinylbenzoic acid--coa ligase	-2.26

	Rv0121c	-	Hypothetical protein	2.21
Cell envelope	Rv3915	-	Hydrolase	-2.06
	Rv3809c	<i>glf</i>	UDP-galactopyranose mutase Glf Phosphoribose	-2.04
	Rv3806c	-	diphosphate:decaprenyl-phosphate phosphoribosyltransferase	-2.10
	Rv3805c	-	Transmembrane protein	-2.07
	Rv2729c	-	Hypothetical protein	2.06
	Rv2446c	-	Integral membrane protein	-2.08
	Rv2209	-	Integral membrane protein	-2.09
	Rv1518	-	Hypothetical protein	-2.09
	Rv1490	-	Hypothetical protein Undecaprenyl-phosphate	-2.25
	Rv1302	<i>rfe</i>	alpha-N-acetylglucosaminyltransferase rfe %28UDP-glcnac transferase%29	-2.10
	Rv1101c	-	Hypothetical protein	-2.12
	Rv0676c	<i>mmpL5</i>	Transmembrane transport protein mmpL5	7.56
	Rv0622	-	Hypothetical protein	2.17
	Rv0111	-	Transmembrane acyltransferase	2.20
Cellular processes	MT1800	-	Glycosyl transferase	2.03
	MT1771	<i>pbp-2</i>	Penicillin-binding protein 4	-2.44
	Rv3625c	<i>mesJ</i>	Cell cycle protein MESJ	-2.13
	Rv2947c	<i>pks15</i>	Polyketide synthase PKS15	-2.06
	Rv2939	<i>papA5</i>	Acyltransferase papA5	-2.12
	Rv2933	<i>ppsC</i>	Phenolphthiocerol synthesis type-I	-2.25

polyketide synthase PPSC				
Rv2748c	<i>ftsK</i>	Cell division transmembrane protein ftsk		2.25
Rv2323c	-	Hypothetical protein		-2.19
Rv2150c	<i>ftsZ</i>	Cell division protein ftsz		2.25
Rv1858	<i>modB</i>	Molbdenum-transport integral membrane protein ABC transporter		-2.01
Rv0793	-	Hypothetical protein		2.01
Rv0679c	-	Putative threonine rich protein		2.18
Rv0634A	-	Hypothetical protein		2.15
Rv0405	<i>pks6</i>	Membrane bound polyketide synthase		-2.03
Rv0174	<i>mce1F</i>	MCE-family protein MCE1F		2.04
MT3220	-	Universal stress protein		-2.19
Central intermediary metabolism	Rv3724B	<i>cut5b</i>	Cutinase	-2.05
	Rv3171c	<i>hpx</i>	Non-Heme haloperoxidase Hpx	2.21
	Rv2776c	-	Oxidoreductase	-2.02
	Rv2006	<i>otsB1</i>	Trehalose-6-phosphate phosphatase otsb1	2.26
	Rv1984c	<i>cfp21</i>	Cutinase precursor CFP21	2.03
	Rv1905c	<i>aao</i>	D-amino acid oxidase	-2.02
	Rv1076	<i>lipU</i>	Lipase lipU	2.15
	Rv0519c	-	Hypothetical protein	2.06
	Rv0407	<i>fgd1</i>	F420-dependent glucose-6-phosphate dehydrogenase	2.04
	Rv0083	-	Oxidoreductase	2.33
Conserved hypothetical protein	Rv3770A	-	Hypothetical protein	-2.02
	Rv3127	-	Hypothetical protein	2.24
	Rv3008	-	Hypothetical protein	-2.15
	Rv2927c	-	Hypothetical protein	2.11
	Rv2653c	-	Phirv2 prophage protein	2.12
	Rv2635	-	Hypothetical protein	2.07
	Rv2633c	-	Hypothetical protein	2.36

Rv2628	-	Hypothetical protein	3.02
Rv2627c	-	Hypothetical protein	2.17
Rv2574	-	Hypothetical protein	2.19
Rv2558	-	Hypothetical protein	2.02
Rv2557	-	Hypothetical protein	2.22
Rv2348c	-	Hypothetical protein	2.10
Rv2302	-	Hypothetical protein	2.12
Rv2275	-	Hypothetical protein	-2.15
Rv2254c	-	Integral membrane protein	-2.37
Rv2253	-	Hypothetical protein	2.26
Rv2169c	-	Transmembrane protein	2.06
Rv2137c	-	Hypothetical protein	2.03
Rv2050	-	Hypothetical protein	2.02
Rv2033c	-	Hypothetical protein	2.23
Rv2032	<i>acg</i>	Hypothetical protein	2.38
Rv2004c	-	Hypothetical protein	2.35
Rv1961	-	Hypothetical protein	-2.16
Rv1870c	-	Hypothetical protein	-2.81
Rv1754c	-	Hypothetical protein	2.07
Rv1740	-	Hypothetical protein	2.05
Rv1733c	-	Transmembrane protein	2.58
Rv1698	-	Hypothetical protein	2.06
Rv1588c	-	REP13E12 repeat-containing protein	-2.17
Rv1439c	-	Hypothetical protein	-2.22
Rv1424c	-	Hypothetical protein	2.13
Rv1157c	-	Hypothetical protein	2.08
Rv1155	-	Hypothetical protein	2.09
Rv1154c	-	Hypothetical protein	2.02
Rv0997	-	Hypothetical protein	2.20
Rv0966c	-	Hypothetical protein	2.02
Rv0885	-	Hypothetical protein	2.06
Rv0863	-	Hypothetical protein	2.04
Rv0680c	-	Transmembrane protein	2.03
Rv0678	-	Hypothetical protein	8.99
Rv0572c	-	Hypothetical protein	2.33
Rv0569	-	Hypothetical protein	2.34
Rv0550c	-	Hypothetical protein	-2.23
Rv0430	-	Hypothetical protein	2.02
Rv0307c	-	Hypothetical protein	2.02
Rv0276	-	Hypothetical protein	2.42
Rv0258c	-	Hypothetical protein	2.08

	Rv0141c	-	Hypothetical protein	2.07
	Rv0080	-	Hypothetical protein	2.08
	MT3590	-	Hypothetical protein	-2.18
	MT3131	-	Hypothetical protein	-2.16
	MT2421	-	Hypothetical protein	2.01
	MT2038	-	Hypothetical protein	2.06
	MT0608	-	Hypothetical protein	2.05
	MT0595	-	Hypothetical protein	2.35
	Rv3909	-	Hypothetical protein	-2.06
	Rv3771c	-	Hypothetical protein	-2.09
	Rv3723	-	Transmembrane protein	-2.04
	Rv3466	-	Hypothetical protein	-2.08
	Rv3435c	-	Transmembrane protein	-2.01
	Rv3126c	-	Hypothetical protein	-2.02
	Rv2811	-	Hypothetical protein	-2.06
	Rv2777c	-	Hypothetical protein	-2.06
	Rv2758c	-	Hypothetical protein	-2.03
	Rv2645	-	Hypothetical protein	-2.04
	Rv2545	-	Hypothetical protein	-2.04
	Rv2248	-	Hypothetical protein	-2.01
	Rv2180c	-	Integral membrane protein	-2.13
	Rv1929c	-	Hypothetical protein	-2.01
	Rv1779c	-	Integral membrane protein	-2.11
	Rv1709	-	Hypothetical protein	-2.05
	Rv1597	-	Hypothetical protein	-2.01
	Rv1573	-	Phirv1 phage protein	-2.04
	Rv1376	-	Hypothetical protein	-2.11
	Rv0965c	-	Hypothetical protein	-2.09
	Rv0787	-	Hypothetical protein	-2.02
	Rv0736	-	Hypothetical protein	-2.03
	Rv0665	-	Hypothetical protein	-2.03
	Rv0514	-	Transmembrane protein	-2.03
	Rv0326	-	Hypothetical protein	-2.01
	Rv0059	-	Hypothetical protein	-2.08
	MT3718	-	Hypothetical protein	-2.06
DNA metabolism	Rv3711c	<i>dnaQ</i>	DNA polymerase III subunit epsilon	2.05
	Rv3246c	<i>mtrA</i>	Two component sensory transduction transcriptional regulatory protein MTRA	2.28
	Rv2646	-	Integrase	-2.11
	Rv2544	<i>lppB</i>	Lipoprotein lppb	-2.09
	Rv2543	<i>lppA</i>	Lipoprotein lppa	-2.15
	Rv2400c	<i>subI</i>	Sulfate-binding lipoprotein	-2.12

Rv2104c	-	Hypothetical protein	-2.08	
Rv1575	-	Phirv1 phage protein	-2.05	
Rv1372	-	Hypothetical protein	2.14	
Rv1108c	<i>xseA</i>	Exodeoxyribonuclease VII large subunit	-2.01	
Rv1033c	<i>trcR</i>	Two component transcriptional regulator TRCR	2.22	
Rv0828c	-	Deaminase	-2.41	
DNA-depende nt RNA poly merase	MT1435	-	DNA-directed RNA polymerase subunit omega	-2.09
Energy metabolism	Rv3722c	-	Hypothetical protein	-2.11
	Rv3685c	<i>cyp137</i>	Cytochrome P450 137	-2.00
	Rv3537	-	3-ketosteroid-delta-1-dehydrogenase	2.03
	Rv3490	<i>otsA</i>	Alpha%2Calpha-trehalose-phosphate synthase	-2.05
	Rv3469c	<i>mhpE</i>	4-hydroxy-2-ketovalerate aldolase	-2.24
	Rv3138	<i>pflA</i>	Pyruvate formate lyase activating protein pfla	-2.26
	Rv3094c	-	Hypothetical protein	-2.28
	Rv3092c	-	Integral membrane protein	-2.14
	Rv3086	<i>adhD</i>	Zinc-type alcohol dehydrogenase adhd	2.09
	Rv3085	-	Short-chain dehydrogenase%2Freductase type	2.60
	Rv3083	-	Monooxygenase	2.49
	Rv3077	-	Hydrolase	2.05
	Rv2465c	-	Ribose-5-phosphate isomerase B	2.00
	Rv2425c	-	Hypothetical protein	-2.03
	Rv2029c	<i>pfkB</i>	Phosphofructokinase pfkb %28phosphohexokinase%29	2.80
	Rv2007c	<i>fdxA</i>	Ferredoxin FDXA	2.25
	Rv1912c	<i>fadB5</i>	Oxidoreductase FADB5	2.01
	Rv1872c	<i>lldD2</i>	L-lactate dehydrogenase %28cytochrome%29 lldd2	-2.07
	Rv1869c	-	Reductase	-2.09
	Rv1834	-	Hydrolase	2.06
	Rv1737c	<i>narK2</i>	Nitrate%2Fnitrite transporter nark2	2.24

	Rv1553	<i>frdB</i>	Fumarate reductase iron-sulfur subunit frdb	2.37
	Rv1552	<i>frdA</i>	Fumarate reductase flavoprotein subunit	2.06
	Rv1538c	<i>ansA</i>	L-aparaginase ansa	2.07
	Rv1213	<i>glgC</i>	Glucose-1-phosphate adenylyltransferase	2.38
	Rv0697	-	Dehydrogenase	2.12
	Rv0467	<i>icl</i>	Isocitrate lyase	-2.28
	Rv0252	<i>nirB</i>	Nitrite reductase large subunit	-2.21
	Rv0136	<i>cyp138</i>	Cytochrome P450 138	2.01
	Rv0132c	<i>fgd2</i>	Putative f420-dependent glucose-6-phosphate dehydrogenase Fgd2	2.00
	Rv0086	<i>hycQ</i>	Hydrogenase hycq	-2.01
	Rv0069c	<i>sdaA</i>	L-serine dehydratase sdaa	-2.08
	MT3145	-	P450 heme-thiolate protein	2.16
Fatty acid and phospholipid metabolism	Rv3530c	-	Short chain dehydrogenase	2.01
	Rv3392c	<i>cmaA1</i>	Cyclopropane-fatty-acyl-phospholipid synthase 1	-2.05
	Rv1075c	-	Hypothetical protein	2.12
	Rv1063c	-	Hypothetical protein	2.04
	Rv0316	-	Muconolactone isomerase	-2.10
	MT3174	-	Substrate--coa ligase	2.05
Hypothetical proteins	Rv3891c	<i>esxD</i>	ESAT-6 like protein esxd	2.17
	Rv3890c	<i>esxC</i>	ESAT-6 like protein ESXC %28ESAT-6 like protein 11%29	2.22
	Rv3874	<i>esxB</i>	10 kda culture filtrate antigen esxb	2.07
	Rv3768	-	Hypothetical protein	2.66
	Rv3766	-	Hypothetical protein	2.16
	Rv3749c	-	Hypothetical protein	-2.18
	Rv3741c	-	Oxidoreductase	-2.55
	Rv3734c	-	Hypothetical protein	2.12

Rv3724A	<i>cut5a</i>	Cutinase precursor	-2.13
Rv3654c	-	Hypothetical protein	2.21
Rv3648c	<i>cspA</i>	Cold shock protein A	2.01
Rv3633	-	Hypothetical protein	2.01
Rv3616c	-	Hypothetical protein	2.17
Rv3614c	-	Hypothetical protein	2.03
Rv3603c	-	Hypothetical protein	-2.18
Rv3583c	-	Transcription factor	2.14
Rv3572	-	Hypothetical protein	2.27
Rv3378c	-	Hypothetical protein	2.01
Rv3354	-	Hypothetical protein	2.01
Rv3310	-	Acid phosphatase	2.17
Rv3295	-	Tetr family transcriptional regulator	2.04
Rv3281	-	Hypothetical protein	2.08
Rv3252c	<i>alkB</i>	Transmembrane alkane 1-monooxygenase alkb	-2.18
Rv3124	-	Transcriptional regulatory protein	2.03
Rv2547	-	Hypothetical protein	2.02
Rv2452c	-	Hypothetical protein	-2.77
Rv2451	-	Hypothetical protein	-2.13
Rv2432c	-	Hypothetical protein	-2.01
Rv2274c	-	Hypothetical protein	-2.01
Rv2063	-	Hypothetical protein	2.07
Rv1942c	-	Hypothetical protein	-2.04
Rv1584c	-	Phirv1 phage protein	-2.15
Rv1158c	-	Hypothetical protein	2.00
Rv1116	-	Hypothetical protein	-2.01
Rv1046c	-	Hypothetical protein	-2.07
Rv1041c	-	IS like-2 transposase	-2.11
Rv0979c	-	Hypothetical protein	2.05
Rv0841	-	Transmembrane protein	-2.38
Rv0699	-	Hypothetical protein	-2.18
Rv0664	-	Hypothetical protein	-2.09
Rv0600c	-	Two component sensor kinase	2.17
Rv0108c	-	Hypothetical protein	2.10
Rv0057	-	Hypothetical protein	-2.32
Rv0040c	<i>mtc28</i>	Secreted proline rich protein MTC28 %28proline rich 28 kda	2.14

		antigen%29	
MT4035	-	Hypothetical protein	-2.09
MT3994	-	Hypothetical protein	-2.00
MT3986	-	Hypothetical protein	2.21
MT3972	-	Hypothetical protein	-2.10
MT3921	-	Hypothetical protein	-2.22
MT3762	-	Hypothetical protein	2.04
MT3745	-	Hypothetical protein	-2.06
MT3510	-	Hypothetical protein	-2.08
MT3491	-	Polyprenyl synthetase	-2.05
MT3413	-	Hypothetical protein	-2.02
MT3412	-	Hypothetical protein	-2.21
MT3378	-	Hypothetical protein	-2.36
MT3290	-	ABC transporter%2C putative	ATP-binding -2.05
MT3207	-	Hypothetical protein	-2.39
MT3077	-	Hypothetical protein	-2.06
MT3037	-	Hypothetical protein	-2.07
MT3033	-	Hypothetical protein	-2.14
MT3024	-	Hypothetical protein	-2.02
MT2988	<i>amt</i>	Ammonium transporter	-2.61
MT2924	-	Hypothetical protein	-2.38
MT2807	-	Hypothetical protein	-2.07
MT2779	-	Hypothetical protein	2.19
MT2617	-	Hypothetical protein	-2.24
MT2502	-	Hypothetical protein	-2.24
MT2480	-	Hypothetical protein	-2.10
MT2472	-	Hypothetical protein	-2.12
MT2401	-	Hypothetical protein	2.01
MT2341	-	Hypothetical protein	2.35
MT2326	-	Hypothetical protein	2.25
MT2291	-	Hypothetical protein	-2.01
MT2165	-	Hypothetical protein	-2.12
MT2104	-	Hypothetical protein	-2.07
MT2092	-	Hypothetical protein	2.22
MT2079	-	Hypothetical protein	2.12

MT1992	-	Hypothetical protein	-2.03
MT1945	-	Hypothetical protein	-2.06
MT1790	-	Hypothetical protein	-2.11
MT1780	-	Hypothetical protein	2.23
MT1777	-	Hypothetical protein	2.39
MT1742	-	Hypothetical protein	-2.02
MT1627	-	Hypothetical protein	-2.30
MT1602	-	Hypothetical protein	2.19
MT1571	-	Hypothetical protein	2.01
MT1356	-	Hypothetical protein	2.03
MT1284	-	Hypothetical protein	-2.05
MT1178	-	Hypothetical protein	2.03
MT1098	-	Hypothetical protein	-2.20
MT1071	-	Hypothetical protein	-2.07
MT1055	-	Hypothetical protein	-2.02
MT1025	-	Hypothetical protein	2.00
MT0991	-	Hypothetical protein	-2.21
MT0932	-	Hypothetical protein	-2.10
MT0915	-	Hypothetical protein	-2.01
MT0835	-	Hypothetical protein	-2.10
MT0600	-	Hypothetical protein	2.27
MT0598	-	Hypothetical protein	2.33
MT0506	-	Hypothetical protein	-2.28
MT0445	-	Hypothetical protein	2.29
MT0392	-	Hypothetical protein	-2.10
MT0130	-	Hypothetical protein	-2.49
MT0099	-	Hypothetical protein	2.57
MT0025	-	Hypothetical protein	-2.04
MT0645	-	Hypothetical protein	-2.03

	MT2138	-	Hypothetical protein	2.04
Main Role				
Biosynthesis				
of cofactor	MT3193	-	Pterin-4-alpha-carbinolamine dehydratase	2.06
prosthetic				
groups and				
carriers				
Mobile and				
extrachromoso	Rv3428c	-	Transposase	2.03
mal element				
functions				
	Rv2894c	<i>xerC</i>	Site-specific tyrosine recombinase xerc	-2.05
	Rv2822c	-	Hypothetical protein	2.08
	Rv2812	-	Transposase	-2.13
	Rv2424c	-	Transposase	-2.19
	Rv2177c	-	Transposase	-2.13
	Rv2086	-	Hypothetical protein	-2.11
	Rv1582c	-	Phirv1 phage protein	-2.14
	Rv1313c	-	Transposase	-2.07
	Rv1051c	-	Hypothetical protein	2.06
	Rv0850	-	Transposase	-2.14
	Rv0797	-	IS1547 transposase	-2.36
	MT2201	-	Hypothetical protein	2.05
	MT3573	-	Integrase%2C putative	-2.02
Nitrogen metabolism	Rv3854c	<i>ethA</i>	Monooxygenase ETHA	-2.44
Protein fate	Rv3660c	-	Hypothetical protein	-2.09
	Rv2903c	<i>lepB</i>	Signal peptidase I lepb	-2.13

Rv2784c	<i>lppU</i>	Lipoprotein lppu	-2.16
Rv2551c	-	Hypothetical protein	-2.01
Rv2525c	-	Hypothetical protein	2.20
Rv2030c	-	Hypothetical protein	2.44
Rv1592c	-	Hypothetical protein	-2.07
Rv0732	<i>secY</i>	Preprotein translocase subunit secy	-2.07
Rv0563	<i>hpxX</i>	Heat shock protein hpx	-2.04
Rv0434	-	Hypothetical protein	-2.14
Rv0840c	<i>pip</i>	Proline iminopeptidase	-2.06
Protein synthesis	Rv3598c	<i>lysS</i>	Lysyl-trna synthetase
	Rv3366	<i>spoU</i>	Trna%2frrna methylase spou
	Rv3012c	<i>gatC</i>	Aspartyl%2Fglutamyl-trna amidotransferase subunit C
	Rv2906c	<i>trmD</i>	Trna %28guanine-N%281%29-%29-methyl transferase
	Rv2882c	<i>frr</i>	Ribosome recycling factor
	Rv2785c	<i>rpsO</i>	30S ribosomal protein S15
	Rv2604c	-	Glutamine amidotransferase subunit pdxt
	Rv1689	<i>tyrS</i>	Tyrosyl-trna synthetase
	Rv1641	<i>infC</i>	Translation initiation factor IF-3
	Rv1015c	<i>rplY</i>	50S ribosomal protein L25%2Fgeneral stress protein Ctc
Rv0716	<i>rplE</i>	50S ribosomal protein L5	-2.10

Rv0715	<i>rplX</i>	50S ribosomal protein L24	-2.25
Rv0714	<i>rplN</i>	50S ribosomal protein L14	-2.34
Rv0651	<i>rplJ</i>	50S ribosomal protein L10	-2.10
Rv2058c	<i>rpmB</i>	50S ribosomal protein L28	-2.01
Purines,pyrimidines, nucleosides, and nucleotides	Rv0570	<i>nrdZ</i>	Ribonucleoside-diphosphate reductase large subunit nrdz 2.02
Regulatory functions	Rv2716	-	Hypothetical protein -2.11
	Rv3911	<i>sigM</i>	RNA polymerase sigma factor sigm -2.27
	Rv3857c	-	Hypothetical protein -2.07
	Rv3855	<i>ethR</i>	Transcriptional regulatory repressor protein %28TETR-family%29 ETHR -2.15
	Rv3773c	-	Hypothetical protein 2.02
	Rv3291c	-	Asnc family transcriptional regulator 2.03
	Rv3183	-	Transcriptional regulatory protein -2.12
	Rv3176c	<i>mesT</i>	Epoxide hydrolase mest -2.01
	Rv2989	-	Transcriptional regulatory protein -2.67
	Rv2884	-	Transcriptional regulatory protein 2.05
	Rv2160c	-	Hypothetical protein 2.14

Rv1685c	-	Hypothetical protein	8.64	
Rv1626	-	Two-component system transcriptional regulator	2.09	
Rv1266c	<i>pknH</i>	Transmembrane serine%2Fthreonine-protein kinase H	2.19	
Rv1219c	-	Transcriptional regulatory protein	3.73	
Rv1152	-	Transcriptional regulatory protein	2.05	
Rv1129c	-	Transcriptional regulator protein	-2.05	
Rv1049	-	Transcriptional repressor protein	2.00	
Rv1019	-	Tetr family transcriptional regulator	2.02	
Rv0827c	-	Transcriptional regulatory protein	2.10	
Rv0452	-	Transcriptional regulatory protein	2.14	
Rv0348	-	Transcriptional regulatory protein	2.09	
Transcription	Rv2704	-	Hypothetical protein	-2.20
Transport and binding proteins	Rv3841	<i>bfrB</i>	Bacterioferritin bfrb	2.99
Rv3132c	<i>devS</i>	Two component sensor histidine kinase DEVS	2.43	
Rv2938	<i>drrC</i>	Daunorubicin-DIM-transport integral membrane protein ABC transporter drrc	-2.21	

Rv2937	<i>drrB</i>	Daunorubicin-DIM-transport integral membrane protein ABC transporter drrb	-2.26
Rv2399c	<i>cysT</i>	Sulfate-transport integral membrane protein ABC transporter cyst	-2.22
Rv2398c	<i>cysW</i>	Sulfate-transport integral membrane protein ABC transporter cysw	-2.19
Rv2387	-	Hypothetical protein	-2.03
Rv1997	<i>ctpF</i>	Metal cation transporter P-type atpase A ctpf	2.18
Rv1747	-	Transmembrane ATP-binding protein ABC transporter	-2.20
Rv1739c	-	Sulphate-transport transmembrane protein ABC transporter	2.25
Rv1687c	-	ABC transporter ATP-binding protein	5.08
Rv1686c	-	Integral membrane protein ABC transporter	14.99
Rv1349	<i>irtB</i>	Drugs-transport transmembrane ATP-binding protein ABC transporter	-2.08
Rv1348	<i>irtA</i>	Drugs-transport transmembrane ATP-binding protein ABC transporter	-2.10
Rv1280c	<i>oppA</i>	Periplasmic oligopeptide-binding lipoprotein oppa	-2.12
Rv1218c	-	Tetronasin-transport ATP-binding protein ABC transporter	4.30
Rv0936	<i>pstA2</i>	Phosphate ABC transporter transmembrane protein	-2.11

Rv0849	-	Integral membrane transport protein	-2.06	
Rv0101	<i>nrp</i>	Peptide synthetase	-2.04	
Rv2877c	-	Integral membrane protein	-2.10	
Rv2395	-	Integral membrane protein	-2.01	
Unclassified				
Role category not yet assigned	Rv3825c	<i>pks2</i>	Polyketide synthase pks2	2.08
Rv3824c	<i>papA1</i>	Polyketide synthase associated protein	2.20	
Rv3784	-	Dtdp-glucose 4%2C6-dehydratase	-2.02	
Rv3739c	<i>ppe67</i>	Ppe family protein	-2.08	
Rv3590c	<i>pe_pgrs5</i> 8	Pe-pgrs family protein	2.14	
Rv3546	<i>fadA5</i>	Acetyl-coa acetyltransferase	2.12	
Rv3486	-	Hypothetical protein	-2.13	

Rv3419c	<i>gcp</i>	Putative metalloprotein%2fap endonuclease	dna-binding%2firon	-2.04
Rv3384c	-	Hypothetical protein		-2.08
Rv3343c	<i>ppe54</i>	Ppe family protein		-2.06
Rv3133c	<i>devR</i>	Two component transcriptional regulatory protein devr		2.36
Rv3130c	<i>tgsI</i>	Triacylglycerol synthase		2.33
Rv3104c	-	Transmembrane protein		-2.04
Rv3088	-	Hypothetical protein		2.22
Rv3084	<i>lipR</i>	Acetyl-hydrolase%2Festerase lipr		2.62
Rv3021c	<i>ppe47</i>	Ppe family protein		-2.53
Rv3019c	<i>esxR</i>	Secreted ESAT-6 like protein ESXR %28TB10.3%29 %28ESAT-6 like protein 9%29		2.01
Rv2958c	-	Glycosyl transferase		-2.05
Rv2935	<i>ppsE</i>	Phenolphthiocerol synthesis type-I polyketide synthase PPSE		-2.09

Rv2934	<i>ppsD</i>	Phenolphthiocerol synthesis polyketide synthase PPSD	type-I	-2.06
Rv2932	<i>ppsB</i>	Phenolphthiocerol synthesis polyketide synthase PPSB	type-I	-2.08
Rv2931	<i>ppsA</i>	Phenolphthiocerol synthesis polyketide synthase PPSA	type-I	-2.02
Rv2930	<i>fadD26</i>	Acyl-coa synthetase		-2.16
Rv2880c	-	Hypothetical protein		-2.09
Rv2869c	-	Transmembrane protein		-2.04
Rv2864c	-	Penicillin-binding lipoprotein		2.14
Rv2856	<i>nicT</i>	Nickel-transport integral membrane protein		-2.04
Rv2813	-	Hypothetical protein		-2.06
Rv2638	-	Hypothetical protein		2.02

Rv2634c	<i>pe_pgrs4₆</i>	Pe-pgrs family protein	2.01
Rv2626c	-	Hypothetical protein	3.12
Rv2625c	-	Hypothetical protein	2.65
Rv2590	<i>fadD9</i>	Fatty-acid-coa ligase	-2.09
Rv2588c	<i>yajC</i>	Preprotein translocase subunit yajc	-2.00
Rv2549c	-	Hypothetical protein	2.13
Rv2500c	<i>fadE19</i>	Acyl-coa dehydrogenase	2.01
Rv2485c	<i>lipQ</i>	Carboxylesterase lipq	2.24
Rv2438c	<i>nadE</i>	NAD synthetase	-2.04
Rv2406c	-	Hypothetical protein	2.05

Rv2397c	<i>cysA1</i>	Sulfate-transport ATP-binding protein ABC transporter cysa1	-2.03
Rv2383c	<i>mbtB</i>	Phenyloxazoline synthase MBTB %28phenyloxazoline synthetase%29	-2.02
Rv2381c	<i>mbtD</i>	Polyketide synthetase MBTD %28polyketide synthase%29	-2.14
Rv2361c	-	Undecaprenyl pyrophosphate synthase	2.19
Rv2359	<i>furB</i>	Ferric uptake regulation protein FURB	2.07
Rv2350c	<i>plcB</i>	Membrane-associated phospholipase C	2.46
Rv2349c	<i>plcC</i>	Phospholipase C 3 PLCC	2.12
Rv2347c	<i>esxP</i>	Putative ESAT-6 like protein ESXP %28ESAT-6 like protein 7%29	-2.02
Rv2328	<i>pe23</i>	Pe family protein	-2.34
Rv2309c	-	Hypothetical protein	2.21
Rv2307c	-	Hypothetical protein	-2.03
Rv2280	-	Dehydrogenase	2.15
Rv2268c	<i>cyp128</i>	Cytochrome p450 128	2.04
Rv2266	<i>cyp124</i>	Cytochrome p450 124 cyp124	2.07
Rv2204c	-	Hypothetical protein	2.03
Rv2187	<i>fadD15</i>	Long-chain-fatty-acid-coa ligase fadd15 %28fatty-acid-coa	2.04

		synthetase%29 synthase%29	%28fatty-acid-coa
Rv2107	<i>pe22</i>	Pe family protein	-2.53
Rv2074	-	Hypothetical protein	2.03
Rv2047c	-	Hypothetical protein	-2.01
Rv2031c	<i>hspX</i>	Heat shock protein hspx	2.48
Rv2003c	-	Hypothetical protein	2.99
Rv1945	-	Hypothetical protein	2.16
Rv1916	<i>aceAB</i>	Isocitrate lyase	2.02
Rv1898	-	Hypothetical protein	2.04
Rv1890c	-	Hypothetical protein	2.03
Rv1880c	<i>cyp140</i>	Cytochrome p450 140 cyp140	2.06

Rv1842c	-	Hypothetical protein	-2.02
Rv1811	<i>mgtC</i>	Mg2%2B transport P-type atpase C	-2.08
Rv1736c	<i>narX</i>	Nitrate reductase narx	2.14
Rv1690	<i>lprJ</i>	Lipoprotein lprj	2.37
Rv1688	<i>mpg</i>	3-methyladenine dna glycosylase	2.37
Rv1682	-	Coiled-coil structural protein	-2.17
Rv1663	<i>pks17</i>	Polyketide synthase pks17	2.17
Rv1644	<i>tsnR</i>	23S rrna methyltransferase tsnr	-2.01
Rv1563c	<i>treY</i>	Maltooligosyltrehalose synthase trey	-2.00
Rv1541c	<i>lprI</i>	Lipoprotein lpri	2.06
Rv1537	<i>dinX</i>	DNA polymerase IV	-2.18
Rv1506c	-	Hypothetical protein	-2.13
Rv1503c	-	Hypothetical protein	-2.14
Rv1464	<i>csd</i>	Cysteine desulfurase	-2.06
Rv1397c	-	Hypothetical protein	-2.05

Rv1252c	<i>lprE</i>	Lipoprotein lpre	2.16
Rv1246c	-	Hypothetical protein	-2.04
Rv1221	<i>sigE</i>	RNA polymerase sigma factor sigE	2.09
Rv1220c	-	Methyltransferase	2.07
Rv1217c	-	Tetronasin-transport integral membrane protein ABC transporter	2.74
Rv1216c	-	Integral membrane protein	2.87
Rv1195	<i>pe13</i>	Pe family protein	-2.12
Rv1089	<i>pe10</i>	Pe family protein	2.09
Rv1073	-	Hypothetical protein	-2.10
Rv0872c	<i>pe_pgrs15</i>	Pe-pgrs family protein	2.08
Rv0867c	<i>rpfA</i>	Resuscitation-promoting factor rpfA	-2.09
Rv0819	-	Hypothetical protein	-2.03
Rv0768	<i>aldA</i>	Aldehyde dehydrogenase NAD dependent alda	2.02
Rv0677c	<i>mmps5</i>	Hypothetical protein	12.04
Rv0661c	-	Hypothetical protein	2.01

Rv0619	<i>galtB</i>	Galactose-1-phosphate uridylyltransferase galtb	-2.09
Rv0571c	-	Hypothetical protein	2.54
Rv0566c	-	Putative nucleotide-binding protein	2.13
Rv0540	-	Hypothetical protein	-2.06
Rv0516c	-	Hypothetical protein	2.02
Rv0468	<i>fadB2</i>	3-hydroxybutyryl-coa dehydrogenase	-2.10
Rv0451c	<i>mmps4</i>	Membrane protein	2.02
Rv0351	<i>grpE</i>	Heat shock protein grpE	2.06
Rv0342	<i>iniA</i>	Isoniazid inducible gene protein INIA	-2.01
Rv0253	<i>nirD</i>	Nitrite reductase %5BNAD%28P%29H%5D small subunit nird	-2.26
Rv0163	-	Hypothetical protein	2.22
Rv0154c	<i>fadE2</i>	Acyl-coa dehydrogenase FADE2	2.07
Rv0152c	<i>pe2</i>	Pe family protein	-2.18
Rv0129c	<i>fbpC</i>	Secreted antigen 85-C FBPC %2885C%29 %28antigen 85 complex C%29 %28AG58C%29 %28Mycolyl transferase 85C%29 %28fibronectin-binding protein C%29	2.25
Rv0062	<i>celA1</i>	Endo-1%2C4-beta-glucanase	-2.32
Rv0011c	-	Putative septation inhibitor protein	-2.08
Unknown function	Rv3796	- Hypothetical protein	-2.02

Rv3669	-	Transmembrane protein	-2.01
Rv3448	-	Integral membrane protein	-2.23
Rv3340	<i>metC</i>	O-acetylhomoserine aminocarboxypropyltransferase	-2.11
Rv3197A	<i>whiB7</i>	Transcriptional regulatory WHIB-like WHIB7	-2.10
Rv3137	-	Monophosphatase	-2.04
Rv3134c	-	Hypothetical protein	2.29
Rv2624c	-	Hypothetical protein	2.70
Rv2623	<i>tb31.7</i>	Hypothetical protein	2.27
Rv2431c	<i>pe25</i>	Pe family protein	-2.09
Rv2309A	-	Hypothetical protein	2.20
Rv2166c	-	Cell division protein mraz	2.00
Rv2160A	-	Hypothetical protein	2.16
Rv2111c	-	Hypothetical protein	2.08
Rv2101	<i>helZ</i>	Helicase helz	2.06
Rv2100	-	Hypothetical protein	2.26
Rv2028c	-	Hypothetical protein	4.04

Rv2005c	-	Hypothetical protein	2.95
Rv1996	-	Hypothetical protein	2.39
Rv1801	<i>ppe29</i>	Ppe family protein	-2.05
Rv1795	-	Hypothetical protein	-2.04
Rv1670	-	Hypothetical protein	2.02
Rv1636	<i>tb15.3</i>	Hypothetical protein	2.14
Rv1242	-	Hypothetical protein	-2.00
Rv0839	-	Hypothetical protein	-2.15
Rv0830	-	Hypothetical protein	2.30
Rv0804	-	Hypothetical protein	-2.03
Rv0749	-	Hypothetical protein	-2.04
Rv0559c	-	Hypothetical protein	2.00

Rv0515	-	13E12 repeat family protein	-2.05
Rv0440	<i>groeL</i>	Chaperonin groel	2.06
Rv0379	<i>secE2</i>	Protein transport protein	2.00
Rv0336	-	13E12 repeat family protein	-2.06
Rv0277c	-	Hypothetical protein	-2.10
Rv0274	-	Hypothetical protein	2.32
Rv0263c	-	Hypothetical protein	2.04
MT3248	-	PPE family protein	2.31
MT2627	-	Copg family DNA-binding protein	-2.06
MT1746	-	PPE family protein	-2.32
MT1233	-	PE family protein	-2.26
MT0369	-	PPE family protein	-2.05
MT0910	-	Hypothetical protein	-2.23