

26	Rv0987	ABC transporter substrate-binding protein	855		-	Ala819Pro	
27	Rv1877	MFS-type transporter	687			Val660Phe	
28	Rv2576c	membrane protein	154		-	Hia128Arg	
29	Rv2999	Peptidase M23B	321	lppY		Met313Thr	
30	Rv3382c	4-hydroxy-3-methylbut-2-enyl diphosphate reductase 2	329	ispH2		Gln178Arg	x Terpenoid backbone biosynthesis x Metabolic Pathways x Biosynthesis of secondary metabolites x Biosynthesis of antibiotics
31	Rv3448	ESX-4 secretion system protein	467	eccD4	-	Ala193Pro	
32	Rv0194	0 X O W L G U X J H I A X [\$ 7 3 E L Q G L Q J S H U P H D V H protein	1194			Leu350Phe, Asp536His	
33	Rv0338c	FeS-binding protein	882			Lys490Asn	
34	Rv0517	Possible membrane acyltransferase	436			Ser408Gly	
35	Rv0793	Putative monooxygenase	101		1YOH	Gly81Asp	Antibiotic biosynthesis
36	Rv0886	Probable ferredoxin / ferredoxin-NADP reductase	575	fprB		Ile413Phe	x Metabolic Pathway x Photosynthesis
37	Rv1023	Enolase	429	eno		Ala348Ser	x Glycolysis / Gluconeogenesis x Methane Metabolism x Metabolic Pathways x Biosynthesis of secondary metabolites x Microbial Metabolism in diverse environments x Biosynthesis of Antibiotics x Carbon metabolism, x Biosynthesis of amino acids x RNA degradation
38	Rv1355c	molybdopterin biosynthesis protein	715	moeY		Ile710Val	Molybdopterin biosynthesis
39	Rv1555	Fumarate reductase subunit D	125	frdD		Ile103Thr	x Citrate cycle (TCA cycle) x Oxidative phosphorylation x Pyruvate Metabolism, x Butanoate Metabolism, x Metabolic Pathways x Biosynthesis of secondary metabolites x Microbial metabolism in diverse environments x Biosynthesis of Antibiotics x Carbon Metabolism
40	Rv1850	Urease subunit alpha	577	ureC		Asp336Gly	x Arginine biosynthesis x Purine Metabolism x Metabolic Pathways x Microbial metabolism in diverse environments
41	Rv2967c	Pyruvate carboxylase	1127	pca		Thr482Met	x Citrate cycle (TCA cycle) x Pyruvate metabolism x Metabolic pathway x Carbon metabolism x Biosynthesis of amino acid
42	Rv3401	glycosyl hydrolase	786			Leu114Pro	Metabolic pathway
43	Rv3537	3-oxosteroid 1- dehydrogenase	563	kstD		Ala148pro	x Steroid Degradation x Metabolic pathway x Microbial metabolic in environments
44	Rv0574c	Probable polyglutamine synthesis accessory protein	380		-	Val16Ile	Capsule biosynthesis
45	Rv1118c	Conserved hypothetical protein	286			Gly30Cys	
46	Rv1504c	Conserved hypothetical protein	199			Glu73Gly	
47	Rv1896c	S-adenosyl-L-methionine-dependent methyltransferase	303			Lys132Glu	Methylation

S/No	Locus_tag	Name	Protein Length	Locus	PDB ID	Pathway
1	Rv3248c	S-adenosyl-L-homocysteine hydrolase	495	sahH	3DHY	x Cysteine and methionine x Metabolism x Metabolic pathways
2	Rv0753c	Methylmalonate-semialdehyde dehydrogenase	510	mmsA		x Valine, leucine and isoleucine x Degradation x beta-Alanine metabolism. x Inositol phosphate metabolism x Propanoate metabolism x Metabolic pathways x Carbon metabolism
3	Rv1187	pyrroline-5-carboxylate dehydrogenase ROCA	543	rocA	4IHI	x Alanine, aspartate and glutamate Metabolism x Arginine and proline metabolism x Metabolic pathways
4	Rv0155	NAD(P) transhydrogenase subunit alpha	366	pntAa/ pntAA		x Nicotinate and nicotinamide metabolism x Metabolic pathways
5	Rv2623	Universal stress protein	297	TB31.7	3CIS	
6	Rv1996	hypothetical protein	317			
7	Rv0468	3-hydroxybutyryl-CoA dehydrogenase	286	fadB2		x Phenylalanine metabolism x Benzoate degradation x Butanoate metabolism x Metabolic pathways x Microbial metabolism in diverse environments
8	Rv1484	enoyl-ACP reductase	269	inhA	1P44	x Fatty acid biosynthesis x Metabolic pathways
9	Rv2691	TRK system potassium uptake protein CEOB	227	ceoB / trkA		
10	Rv0091	bifunctional 5-methylthioadenosine nucleosidase / S-adenosylhomocysteine nucleosidase	255	Mtn / pfs		x Cysteine and methionine metabolism x Metabolic pathways x Biosynthesis of amino acids,
11	Rv2858c	Aldehyde dehydrogenase	455	aldC		x Glycolysis / Gluconeogenesis x Pentose and glucuronate interconversions x Ascorbate and aldarate metabolism x Fatty acid degradation x Valine, leucine and isoleucine degradation x Lysine degradation x Arginine and proline metabolism x Histidine metabolism x Tryptophan metabolism x beta-Alanine metabolism x Glycerolipid metabolism x Pyruvate metabolism x Chloroalkane and chloroalkene degradation x Limonene and pinene degradation x Metabolic pathways x Biosynthesis of secondary metabolites x Microbial metabolism in diverse environments x Biosynthesis of antibiotics
12	Rv1059	Hypothetical protein	354			
13	Rv3777	Oxidoreductase	328			
14	Rv2971	Oxidoreductase			4OTK	
15	Rv2766c	3-ketoacyl-ACP reductase	260			
16	Rv2671	3 R V V L E O H E L I X Q F W L R Q D O biosynthesis protein RibD	H O I I P H U L E R A D Y L Q			x 5 L E R A D Y L Q P H W D E R O L V P x Metabolic pathways x Biosynthesis of secondary metabolites
17	Rv2763cDHFR)264					

11. Zhao X, Yu H, Yu S, Wang F, Sacchetti JC, et al. (2006) Hydrogen peroxide-mediated isoniazid activation catalyzed by Mycobacterium tuberculosis catalase-peroxidase (KatG) and its S315T mutant. Biochemistry 45: 4131-4140.

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