**Supplementary Table 4: Functional Annotation of predicted smORFs in *M. tuberculosis***

|  |  |
| --- | --- |
| SeqName | Description |
| mtb\_smORF6\_635974\_636144\_+ | transmembrane protein |
| mtb\_smORF15\_986260\_986535\_+ | site-specific integrase |
| mtb\_smORF17\_1014400\_1014555\_+ | PPE domain-containing protein |
| mtb\_smORF24\_1170550\_1170840\_+ | mutator family transposase |
| mtb\_smORF27\_1196185\_1196319\_+ | transmembrane domain protein |
| mtb\_smORF33\_1471750\_1471899\_+ | Bestrophin homolog |
| mtb\_smORF34\_1473025\_1473264\_+ | histidine kinase |
| mtb\_smORF36\_1474564\_1474686\_+ | retrotransposon protein |
| mtb\_smORF47\_2029789\_2030040\_+ | PPE family protein |
| mtb\_smORF48\_2030347\_2030523\_+ | ESAT-6 like protein EsxJ |
| mtb\_smORF52\_2343994\_2344224\_+ | transposase |
| mtb\_smORF70\_3031594\_3031755\_+ | repressor lexA |
| mtb\_smORF73\_3184669\_3184854\_+ | prevent-host-death family protein |
| mtb\_smORF78\_3429568\_3429750\_+ | putative membrane protein |
| mtb\_smORF82\_3788482\_3788616\_+ | enoyl-CoA hydratase EchA18.1 |
| mtb\_smORF85\_3846637\_3846855\_+ | PE family protein |
| mtb\_smORF86\_3970576\_3970788\_+ | PPE family protein PPE61 |
| mtb\_smORF91\_4110664\_4110909\_+ | transmembrane protein |
| mtb\_smORF93\_4169467\_4169709\_+ | cutinase cut5a |
| mtb\_smORF111\_622142\_622345\_+ | ATPase involved in chromosome partitioning |
| mtb\_smORF122\_1176647\_1176904\_+ | integrase |
| mtb\_smORF124\_1215752\_1216054\_+ | cellulase celA2b |
| mtb\_smORF129\_1472558\_1472665\_+ | ABC transporter substrate-binding protein |
| mtb\_smORF130\_1473209\_1473346\_+ | Zinc/iron permease |
| mtb\_smORF133\_1593875\_1594171\_+ | HNH endonuclease signature motif containing protein |
| mtb\_smORF134\_1622768\_1623007\_+ | transcriptional regulator |
| mtb\_smORF136\_1701098\_1701346\_+ | methyltransferase family protein |
| mtb\_smORF140\_1914938\_1915096\_+ | tyrosyl-tRNA synthase tyrS |
| mtb\_smORF148\_2142080\_2142373\_+ | Putative integrase fragment |
| mtb\_smORF150\_2232275\_2232427\_+ | putative 23S rRNA methyltransferase Erm(37) |
| mtb\_smORF151\_2255927\_2256106\_+ | trehalose-6-phosphate phosphatase OtsB1 |
| mtb\_smORF154\_2398403\_2398684\_+ | dihydroorotate dehydrogenase |
| mtb\_smORF167\_3168212\_3168427\_+ | hydrogenase nickel incorporation protein HypB |
| mtb\_smORF168\_3178196\_3178336\_+ | GIY-YIG nuclease family protein |
| mtb\_smORF172\_3494735\_3494992\_+ | pyridoxamine 5'-phosphate oxidase family protein |
| mtb\_smORF173\_3568280\_3568537\_+ | ABC transporter ATP-binding protein |
| mtb\_smORF183\_3799118\_3799306\_+ | multidrug transporter |
| mtb\_smORF185\_3965423\_3965620\_+ | IS21 family transposase |
| mtb\_smORF188\_4008461\_4008562\_+ | type II toxin-antitoxin system VapB family antitoxin |
| mtb\_smORF201\_733458\_733718\_+ | preprotein translocase subunit SecE |
| mtb\_smORF208\_1176228\_1176485\_+ | Fic family protein |
| mtb\_smORF210\_1264338\_1264556\_+ | acetyl-CoA acetyltransferase |
| mtb\_smORF215\_1474818\_1474901\_+ | Outer Membrane Receptor Proteins (Fe Transport) |
| mtb\_smORF217\_1589199\_1589501\_+ | alanine racemase |
| mtb\_smORF249\_3494538\_3494783\_+ | pyridoxamine 5'-phosphate oxidase family protein |
| mtb\_smORF252\_3593562\_3593852\_+ | acetyltransferase |
| mtb\_smORF256\_3841347\_3841610\_+ | histone acetyltransferase |
| mtb\_smORF262\_4075560\_4075682\_+ | transmembrane protein |
| mtb\_smORF270\_4410873\_4411166\_+ | 50S ribosomal protein L34 |
| mtb\_smORF280\_4077711\_4077884\_- | TetR/AcrR family transcriptional regulator |
| mtb\_smORF282\_3892131\_3892313\_- | alpha/beta hydrolase |
| mtb\_smORF284\_3849024\_3849188\_- | Transposase |
| mtb\_smORF286\_3755328\_3755507\_- | transposase |
| mtb\_smORF294\_3378495\_3378662\_- | PPE family protein |
| mtb\_smORF295\_3376749\_3377036\_- | PPE family protein |
| mtb\_smORF296\_3310608\_3310820\_- | putative glycosyl transferase |
| mtb\_smORF297\_3310272\_3310379\_- | GDP-L-fucose synthase |
| mtb\_smORF301\_3123537\_3123692\_- | Putative CRISPR-associated RNAse Cas2 |
| mtb\_smORF304\_2949342\_2949599\_- | acyl-[acyl-carrier protein] desaturase desA1 |
| mtb\_smORF315\_2367111\_2367410\_- | PPE family protein |
| mtb\_smORF316\_2365230\_2365466\_- | MarR family transcriptional regulator |
| mtb\_smORF317\_2357907\_2358206\_- | PE family protein |
| mtb\_smORF320\_2307009\_2307239\_- | polyketide synthase |
| mtb\_smORF321\_2233881\_2234051\_- | dehydrogenase |
| mtb\_smORF322\_2228655\_2228828\_- | LysR family transcriptional regulator |
| mtb\_smORF330\_1696398\_1696574\_- | class I SAM-dependent methyltransferase |
| mtb\_smORF334\_1517304\_1517492\_- | acyl-CoA dehydrogenase family protein |
| mtb\_smORF343\_1114173\_1114382\_- | methyltransferase |
| mtb\_smORF345\_1057173\_1057391\_- | secreted antigen 85-C FbpC\_2 |
| mtb\_smORF350\_934293\_934481\_- | CocE/NonD family hydrolase |
| mtb\_smORF366\_258123\_258383\_- | butyryl-CoA dehydrogenase |
| mtb\_smORF368\_156399\_156680\_- | Secreted antigen 85-C FbpC (85C) (antigen 85 complex C) (Ag58C) (mycolyl transferase 85C) (fibronectin-binding protein C) |
| mtb\_smORF377\_4317521\_4317652\_- | Transposase (fragment) |
| mtb\_smORF378\_4278185\_4278301\_- | twitching motility protein PilT |
| mtb\_smORF380\_4190276\_4190575\_- | PPE family protein |
| mtb\_smORF382\_3987248\_3987463\_- | short chain dehydrogenase |
| mtb\_smORF388\_3846995\_3847231\_- | transposase |
| mtb\_smORF389\_3846053\_3846271\_- | integrase |
| mtb\_smORF390\_3842069\_3842305\_- | transposase |
| mtb\_smORF396\_3494330\_3494539\_- | PPE family protein |
| mtb\_smORF401\_3350990\_3351262\_- | 2-hydroxyhepta-2%2C4-diene-1%2C7-dioate isomerase |
| mtb\_smORF405\_2971994\_2972161\_- | helix-turn-helix transcriptional regulator |
| mtb\_smORF407\_2725595\_2725861\_- | LysR family transcriptional regulator |
| mtb\_smORF410\_2580038\_2580253\_- | excalibur calcium-binding domain-containing protein |
| mtb\_smORF418\_2387969\_2388175\_- | PE family protein |
| mtb\_smORF434\_1473134\_1473394\_- | UvrABC System Protein B |
| mtb\_smORF425\_2124830\_2125042\_- | bacterioferritin-associated ferredoxin |
| mtb\_smORF436\_1176011\_1176265\_- | Mobile element protein |
| mtb\_smORF439\_1096526\_1096720\_- | PE-PGRS family protein |
| mtb\_smORF446\_799976\_800272\_- | putative transcriptional regulator |
| mtb\_smORF456\_11123\_11341\_- | tyrosine-type recombinase/integrase |
| mtb\_smORF476\_3435718\_3435855\_- | LLM class flavin-dependent oxidoreductase |
| mtb\_smORF486\_2969413\_2969604\_- | TIGR02611 family protein |
| mtb\_smORF494\_2441659\_2441934\_- | Gp101 |
| mtb\_smORF498\_2365051\_2365125\_- | IS3 family transposase |
| mtb\_smORF500\_2263039\_2263293\_- | HNH endonuclease domain-containing protein |
| mtb\_smORF501\_2260021\_2260260\_- | type ISP restriction/modification enzyme |
| mtb\_smORF512\_1753405\_1753578\_- | PPE family protein |
| mtb\_smORF515\_1693996\_1694262\_- | TDP-4-oxo-6-deoxy-D-glucose aminotransferase |
| mtb\_smORF518\_1616365\_1616592\_- | transcriptional regulator |
| mtb\_smORF522\_1472059\_1472289\_- | Signal transduction histidine-protein kinase/phosphatase MprB |
| mtb\_smORF531\_1160095\_1160358\_- | transposase |
| mtb\_smORF535\_1057300\_1057530\_- | mycolyltransferase |
| mtb\_smORF540\_850342\_850512\_- | transposase |
| mtb\_smORF542\_835015\_835266\_- | 3-hydroxyisobutyrate dehydrogenase |
| mtb\_smORF545\_733438\_733665\_- | Rab GTPase-binding effector protein 2 |
| mtb\_smORF546\_704446\_704649\_- | oxidoreductase |
| mtb\_smORF555\_180805\_181029\_- | PE-PGRS family protein |

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|  |  |
| --- | --- |
| SeqName | Description |
| mtb\_smORF1\_10966\_11121\_plus | hypothetical protein |
| mtb\_smORF2\_13717\_13854\_plus | ---NA--- |
| mtb\_smORF3\_33964\_34218\_plus | hypothetical protein BTB1458\_0040 |
| mtb\_smORF4\_416959\_417228\_plus | ---NA--- |
| mtb\_smORF5\_483610\_483789\_plus | Uncharacterised protein |
| mtb\_smORF6\_635974\_636144\_plus | transmembrane protein |
| mtb\_smORF7\_663385\_663579\_plus | predicted protein |
| mtb\_smORF8\_703999\_704241\_plus | ---NA--- |
| mtb\_smORF9\_705979\_706155\_plus | ---NA--- |
| mtb\_smORF10\_789172\_789420\_plus | Uncharacterised protein |
| mtb\_smORF11\_800107\_800370\_plus | ---NA--- |
| mtb\_smORF12\_811234\_811482\_plus | ---NA--- |
| mtb\_smORF13\_931786\_932010\_plus | Uncharacterised protein |
| mtb\_smORF14\_982531\_982674\_plus | Uncharacterised protein |
| mtb\_smORF15\_986260\_986535\_plus | site-specific integrase |
| mtb\_smORF16\_1006546\_1006770\_plus | exported hypothetical protein |
| mtb\_smORF17\_1014400\_1014555\_plus | PPE domain-containing protein |
| mtb\_smORF18\_1023865\_1024122\_plus | Uncharacterised protein |
| mtb\_smORF19\_1056880\_1057167\_plus | Uncharacterised protein |
| mtb\_smORF20\_1057447\_1057641\_plus | MULTISPECIES: hypothetical protein |
| mtb\_smORF21\_1061653\_1061832\_plus | predicted protein |
| mtb\_smORF22\_1113691\_1113864\_plus | Hypothetical protein BCGMEX\_1024 |
| mtb\_smORF23\_1148218\_1148430\_plus | Uncharacterised protein |
| mtb\_smORF24\_1170550\_1170840\_plus | mutator family transposase |
| mtb\_smORF25\_1172116\_1172367\_plus | ---NA--- |
| mtb\_smORF26\_1179175\_1179348\_plus | ---NA--- |
| mtb\_smORF27\_1196185\_1196319\_plus | transmembrane domain protein |
| mtb\_smORF28\_1216276\_1216395\_plus | ---NA--- |
| mtb\_smORF29\_1220221\_1220352\_plus | Uncharacterised protein |
| mtb\_smORF30\_1272136\_1272363\_plus | predicted protein |
| mtb\_smORF31\_1355599\_1355826\_plus | Uncharacterised protein |
| mtb\_smORF32\_1413106\_1413360\_plus | hypothetical protein, partial |
| mtb\_smORF33\_1471750\_1471899\_plus | ---NA--- |
| mtb\_smORF34\_1473025\_1473264\_plus | Uncharacterised protein |
| mtb\_smORF35\_1473940\_1474104\_plus | Uncharacterised protein |
| mtb\_smORF36\_1474564\_1474686\_plus | retrotransposon protein |
| mtb\_smORF37\_1476769\_1476999\_plus | ---NA--- |
| mtb\_smORF38\_1485205\_1485384\_plus | ---NA--- |
| mtb\_smORF39\_1533670\_1533822\_plus | ---NA--- |
| mtb\_smORF40\_1537537\_1537794\_plus | Uncharacterised protein |
| mtb\_smORF41\_1774921\_1775040\_plus | hypothetical protein |
| mtb\_smORF42\_1783744\_1784001\_plus | ---NA--- |
| mtb\_smORF43\_1893691\_1893957\_plus | ---NA--- |
| mtb\_smORF44\_1960837\_1961037\_plus | hypothetical protein MT1775 |
| mtb\_smORF45\_1992739\_1992972\_plus | Uncharacterised protein |
| mtb\_smORF46\_2024872\_2025132\_plus | ---NA--- |
| mtb\_smORF47\_2029789\_2030040\_plus | PPE family protein |
| mtb\_smORF48\_2030347\_2030523\_plus | ESAT-6 like protein EsxJ |
| mtb\_smORF49\_2203582\_2203773\_plus | Uncharacterised protein |
| mtb\_smORF50\_2233723\_2233980\_plus | Uncharacterised protein |
| mtb\_smORF51\_2338438\_2338719\_plus | possible membrane protein |
| mtb\_smORF52\_2343994\_2344224\_plus | transposase |
| mtb\_smORF53\_2367289\_2367525\_plus | ---NA--- |
| mtb\_smORF54\_2445328\_2445492\_plus | ---NA--- |
| mtb\_smORF55\_2453557\_2453832\_plus | ---NA--- |
| mtb\_smORF56\_2564131\_2564340\_plus | ---NA--- |
| mtb\_smORF57\_2565064\_2565249\_plus | hypothetical protein, partial |
| mtb\_smORF58\_2579992\_2580255\_plus | ---NA--- |
| mtb\_smORF59\_2581975\_2582157\_plus | Uncharacterised protein |
| mtb\_smORF60\_2603650\_2603739\_plus | ---NA--- |
| mtb\_smORF61\_2619019\_2619309\_plus | ---NA--- |
| mtb\_smORF62\_2654989\_2655210\_plus | Uncharacterised protein |
| mtb\_smORF63\_2739895\_2740086\_plus | Uncharacterised protein |
| mtb\_smORF64\_2756656\_2756910\_plus | hypothetical protein BCGT\_2288 |
| mtb\_smORF65\_2849701\_2849892\_plus | ---NA--- |
| mtb\_smORF66\_2870125\_2870361\_plus | ---NA--- |
| mtb\_smORF67\_2925238\_2925528\_plus | Uncharacterised protein |
| mtb\_smORF68\_2954767\_2954961\_plus | hypothetical protein, partial |
| mtb\_smORF69\_3020323\_3020511\_plus | Uncharacterised protein |
| mtb\_smORF70\_3031594\_3031755\_plus | repressor lexA |
| mtb\_smORF71\_3073579\_3073722\_plus | ---NA--- |
| mtb\_smORF72\_3092701\_3092973\_plus | hypothetical protein L838\_1296 |
| mtb\_smORF73\_3184669\_3184854\_plus | prevent-host-death family protein |
| mtb\_smORF74\_3189784\_3189942\_plus | Uncharacterised protein |
| mtb\_smORF75\_3359308\_3359478\_plus | hypothetical protein BIS44\_2831 |
| mtb\_smORF76\_3411004\_3411186\_plus | ---NA--- |
| mtb\_smORF77\_3425401\_3425580\_plus | ---NA--- |
| mtb\_smORF78\_3429568\_3429750\_plus | putative membrane protein |
| mtb\_smORF79\_3493603\_3493707\_plus | ---NA--- |
| mtb\_smORF80\_3493720\_3493959\_plus | hypothetical protein |
| mtb\_smORF81\_3722473\_3722766\_plus | ---NA--- |
| mtb\_smORF82\_3788482\_3788616\_plus | enoyl-CoA hydratase EchA18.1 |
| mtb\_smORF83\_3798946\_3799101\_plus | ---NA--- |
| mtb\_smORF84\_3821818\_3822015\_plus | Uncharacterised protein |
| mtb\_smORF85\_3846637\_3846855\_plus | PE family protein |
| mtb\_smORF86\_3970576\_3970788\_plus | PPE family protein PPE61 |
| mtb\_smORF87\_4056292\_4056495\_plus | ---NA--- |
| mtb\_smORF88\_4057201\_4057422\_plus | ---NA--- |
| mtb\_smORF89\_4081117\_4081338\_plus | hypothetical protein MULP\_05409 |
| mtb\_smORF90\_4107220\_4107456\_plus | ---NA--- |
| mtb\_smORF91\_4110664\_4110909\_plus | transmembrane protein |
| mtb\_smORF92\_4118557\_4118739\_plus | hypothetical protein CAURIC\_10590 |
| mtb\_smORF93\_4169467\_4169709\_plus | cutinase cut5a |
| mtb\_smORF94\_4185850\_4186083\_plus | ---NA--- |
| mtb\_smORF95\_4264336\_4264533\_plus | hypothetical protein |
| mtb\_smORF96\_4274680\_4274859\_plus | ---NA--- |
| mtb\_smORF97\_4287847\_4288128\_plus | Conserved exported protein of uncharacterised function |
| mtb\_smORF98\_4314031\_4314105\_plus | Uncharacterised protein |
| mtb\_smORF99\_4317805\_4317981\_plus | Uncharacterised protein |
| mtb\_smORF100\_4318519\_4318734\_plus | Uncharacterised protein |
| mtb\_smORF101\_13859\_14092\_plus | Uncharacterised protein |
| mtb\_smORF102\_71534\_71836\_plus | ---NA--- |
| mtb\_smORF103\_74489\_74698\_plus | ---NA--- |
| mtb\_smORF104\_99371\_99640\_plus | Conserved membrane protein of uncharacterised function |
| mtb\_smORF105\_130910\_131122\_plus | Uncharacterised protein |
| mtb\_smORF106\_221807\_221989\_plus | ---NA--- |
| mtb\_smORF107\_293567\_293794\_plus | ---NA--- |
| mtb\_smORF108\_333086\_333349\_plus | ---NA--- |
| mtb\_smORF109\_339107\_339367\_plus | predicted protein |
| mtb\_smORF110\_476237\_476467\_plus | hypothetical protein, partial |
| mtb\_smORF111\_622142\_622345\_plus | ATPase involved in chromosome partitioning |
| mtb\_smORF112\_675992\_676234\_plus | ---NA--- |
| mtb\_smORF113\_752828\_753076\_plus | Uncharacterised protein |
| mtb\_smORF114\_832469\_832696\_plus | hypothetical protein MLAC\_39980 |
| mtb\_smORF115\_934178\_934459\_plus | ---NA--- |
| mtb\_smORF116\_986144\_986413\_plus | Uncharacterised protein |
| mtb\_smORF117\_1026815\_1027075\_plus | ---NA--- |
| mtb\_smORF118\_1034516\_1034755\_plus | Uncharacterised protein |
| mtb\_smORF119\_1113812\_1114060\_plus | ---NA--- |
| mtb\_smORF120\_1164173\_1164466\_plus | Conserved protein of uncharacterised function%2C possible phage protein |
| mtb\_smORF121\_1169123\_1169290\_plus | ---NA--- |
| mtb\_smORF122\_1176647\_1176904\_plus | integrase |
| mtb\_smORF123\_1200482\_1200580\_plus | hypothetical protein CAB90\_01225 |
| mtb\_smORF124\_1215752\_1216054\_plus | cellulase celA2b |
| mtb\_smORF125\_1239956\_1240108\_plus | ---NA--- |
| mtb\_smORF126\_1282145\_1282354\_plus | Uncharacterised protein |
| mtb\_smORF127\_1351010\_1351309\_plus | ---NA--- |
| mtb\_smORF128\_1389143\_1389262\_plus | hypothetical protein MT1285 |
| mtb\_smORF129\_1472558\_1472665\_plus | Uncharacterised protein |
| mtb\_smORF130\_1473209\_1473346\_plus | Uncharacterised protein |
| mtb\_smORF131\_1473464\_1473613\_plus | hypothetical protein |
| mtb\_smORF132\_1547600\_1547755\_plus | ---NA--- |
| mtb\_smORF133\_1593875\_1594171\_plus | HNH endonuclease signature motif containing protein |
| mtb\_smORF134\_1622768\_1623007\_plus | transcriptional regulator |
| mtb\_smORF135\_1653512\_1653799\_plus | Uncharacterised protein |
| mtb\_smORF136\_1701098\_1701346\_plus | methyltransferase family protein |
| mtb\_smORF137\_1757438\_1757671\_plus | Uncharacterised protein |
| mtb\_smORF138\_1851941\_1852213\_plus | ---NA--- |
| mtb\_smORF139\_1900838\_1901131\_plus | hypothetical protein BN9982\_530014 |
| mtb\_smORF140\_1914938\_1915096\_plus | tyrosyl-tRNA synthase tyrS |
| mtb\_smORF141\_1946417\_1946524\_plus | Uncharacterised protein |
| mtb\_smORF142\_1999208\_1999426\_plus | hypothetical protein CIP107514\_02156 |
| mtb\_smORF143\_2014478\_2014684\_plus | Uncharacterised protein |
| mtb\_smORF144\_2017475\_2017717\_plus | Uncharacterised protein |
| mtb\_smORF145\_2031965\_2032243\_plus | Uncharacterised protein |
| mtb\_smORF146\_2087654\_2087914\_plus | ---NA--- |
| mtb\_smORF147\_2138423\_2138701\_plus | Uncharacterised protein |
| mtb\_smORF148\_2142080\_2142373\_plus | Putative integrase fragment |
| mtb\_smORF149\_2207438\_2207740\_plus | Uncharacterised protein |
| mtb\_smORF150\_2232275\_2232427\_plus | putative 23S rRNA methyltransferase Erm(37) |
| mtb\_smORF151\_2255927\_2256106\_plus | trehalose-6-phosphate phosphatase OtsB1 |
| mtb\_smORF152\_2263226\_2263429\_plus | Uncharacterised protein |
| mtb\_smORF153\_2365133\_2365381\_plus | Uncharacterised protein |
| mtb\_smORF154\_2398403\_2398684\_plus | dihydroorotate dehydrogenase |
| mtb\_smORF155\_2581511\_2581651\_plus | ---NA--- |
| mtb\_smORF156\_2626205\_2626360\_plus | Conserved membrane protein of uncharacterised function |
| mtb\_smORF157\_2679968\_2680177\_plus | Uncharacterised protein |
| mtb\_smORF158\_2739794\_2740063\_plus | hypothetical protein MIC448\_190004 |
| mtb\_smORF159\_2745140\_2745400\_plus | ---NA--- |
| mtb\_smORF160\_2827949\_2828236\_plus | Uncharacterised protein |
| mtb\_smORF161\_2830742\_2830921\_plus | ---NA--- |
| mtb\_smORF162\_2877695\_2877943\_plus | conserved hypothetical protein |
| mtb\_smORF163\_2881466\_2881702\_plus | Protein of uncharacterised function (DUF2652) |
| mtb\_smORF164\_2955611\_2955694\_plus | ---NA--- |
| mtb\_smORF165\_2959898\_2960095\_plus | Uncharacterised protein |
| mtb\_smORF166\_3071306\_3071563\_plus | Uncharacterised protein |
| mtb\_smORF167\_3168212\_3168427\_plus | hydrogenase nickel incorporation protein HypB |
| mtb\_smORF168\_3178196\_3178336\_plus | GIY-YIG nuclease family protein |
| mtb\_smORF169\_3214259\_3214501\_plus | ---NA--- |
| mtb\_smORF170\_3414104\_3414349\_plus | Uncharacterised protein |
| mtb\_smORF171\_3457910\_3458065\_plus | ---NA--- |
| mtb\_smORF172\_3494735\_3494992\_plus | pyridoxamine 5'-phosphate oxidase family protein |
| mtb\_smORF173\_3568280\_3568537\_plus | ABC transporter ATP-binding protein |
| mtb\_smORF174\_3593570\_3593767\_plus | hypothetical protein MRGA327\_19780 |
| mtb\_smORF175\_3597533\_3597802\_plus | ---NA--- |
| mtb\_smORF176\_3610046\_3610243\_plus | Uncharacterised protein |
| mtb\_smORF177\_3639944\_3640066\_plus | hypothetical protein I917\_22890 |
| mtb\_smORF178\_3708155\_3708205\_plus | ---NA--- |
| mtb\_smORF179\_3720902\_3721123\_plus | ---NA--- |
| mtb\_smORF180\_3753509\_3753724\_plus | Uncharacterised protein |
| mtb\_smORF181\_3798512\_3798805\_plus | ---NA--- |
| mtb\_smORF182\_3798956\_3799063\_plus | hypothetical protein MT3491.1 |
| mtb\_smORF183\_3799118\_3799306\_plus | multidrug transporter |
| mtb\_smORF184\_3843605\_3843865\_plus | Uncharacterised protein |
| mtb\_smORF185\_3965423\_3965620\_plus | IS21 family transposase |
| mtb\_smORF186\_3997712\_3997819\_plus | ---NA--- |
| mtb\_smORF187\_4008284\_4008448\_plus | hypothetical protein BCGT\_3432 |
| mtb\_smORF188\_4008461\_4008562\_plus | type II toxin-antitoxin system VapB family antitoxin |
| mtb\_smORF189\_4205246\_4205515\_plus | Uncharacterised protein |
| mtb\_smORF190\_4215809\_4216081\_plus | hypothetical protein |
| mtb\_smORF191\_4376090\_4376377\_plus | ---NA--- |
| mtb\_smORF192\_4393088\_4393300\_plus | hypothetical protein BTU11\_21450 |
| mtb\_smORF193\_230481\_230630\_plus | hypothetical protein MT0204.1 |
| mtb\_smORF194\_316371\_316568\_plus | hypothetical protein |
| mtb\_smORF195\_333126\_333380\_plus | ---NA--- |
| mtb\_smORF196\_424614\_424898\_plus | hypothetical protein VNDN105\_03680 |
| mtb\_smORF197\_665262\_665540\_plus | ---NA--- |
| mtb\_smORF198\_665667\_665831\_plus | Uncharacterised protein |
| mtb\_smORF199\_702255\_702467\_plus | ---NA--- |
| mtb\_smORF200\_704520\_704759\_plus | Uncharacterised protein |
| mtb\_smORF201\_733458\_733718\_plus | preprotein translocase subunit SecE |
| mtb\_smORF202\_878424\_878660\_plus | ---NA--- |
| mtb\_smORF203\_895512\_895784\_plus | ---NA--- |
| mtb\_smORF204\_924666\_924878\_plus | ---NA--- |
| mtb\_smORF205\_931818\_931994\_plus | Uncharacterised protein |
| mtb\_smORF206\_996186\_996467\_plus | Uncharacterised protein |
| mtb\_smORF207\_1052526\_1052732\_plus | ---NA--- |
| mtb\_smORF208\_1176228\_1176485\_plus | Fic family protein |
| mtb\_smORF209\_1195992\_1196228\_plus | Uncharacterised protein |
| mtb\_smORF210\_1264338\_1264556\_plus | acetyl-CoA acetyltransferase |
| mtb\_smORF211\_1282890\_1283036\_plus | DUF1059 domain-containing protein |
| mtb\_smORF212\_1338507\_1338776\_plus | Uncharacterised protein |
| mtb\_smORF213\_1409265\_1409522\_plus | ---NA--- |
| mtb\_smORF214\_1425870\_1426052\_plus | Uncharacterised protein |
| mtb\_smORF215\_1474818\_1474901\_plus | Uncharacterised protein |
| mtb\_smORF216\_1524783\_1524962\_plus | ---NA--- |
| mtb\_smORF217\_1589199\_1589501\_plus | alanine racemase |
| mtb\_smORF218\_1692630\_1692800\_plus | ---NA--- |
| mtb\_smORF219\_1774863\_1775120\_plus | hypothetical protein |
| mtb\_smORF220\_1842168\_1842428\_plus | Uncharacterised protein |
| mtb\_smORF221\_1899972\_1900247\_plus | Conserved exported protein of uncharacterised function |
| mtb\_smORF222\_1934403\_1934555\_plus | ---NA--- |
| mtb\_smORF223\_1957407\_1957565\_plus | ---NA--- |
| mtb\_smORF224\_2041812\_2041988\_plus | ---NA--- |
| mtb\_smORF225\_2124897\_2125094\_plus | hypothetical protein NCGM2209\_2209 |
| mtb\_smORF226\_2136030\_2136218\_plus | hypothetical protein, partial |
| mtb\_smORF227\_2206950\_2207207\_plus | hypothetical protein MRA\_1974 |
| mtb\_smORF228\_2232399\_2232671\_plus | PIN domain-containing protein |
| mtb\_smORF229\_2256450\_2256668\_plus | ---NA--- |
| mtb\_smORF230\_2332842\_2333144\_plus | ---NA--- |
| mtb\_smORF231\_2402646\_2402867\_plus | ---NA--- |
| mtb\_smORF232\_2481594\_2481857\_plus | Uncharacterised protein |
| mtb\_smORF233\_2594520\_2594732\_plus | Uncharacterised protein |
| mtb\_smORF234\_2614188\_2614391\_plus | ---NA--- |
| mtb\_smORF235\_2626350\_2626577\_plus | Uncharacterised protein |
| mtb\_smORF236\_2713887\_2714078\_plus | predicted protein |
| mtb\_smORF237\_2732871\_2732933\_plus | ---NA--- |
| mtb\_smORF238\_2775483\_2775632\_plus | Uncharacterised protein |
| mtb\_smORF239\_2786232\_2786519\_plus | Conserved exported protein of uncharacterised function |
| mtb\_smORF240\_2881845\_2882147\_plus | Protein of uncharacterised function (DUF2652) |
| mtb\_smORF241\_2969127\_2969306\_plus | ---NA--- |
| mtb\_smORF242\_2969355\_2969537\_plus | hypothetical protein BN9982\_800014 |
| mtb\_smORF243\_3053589\_3053855\_plus | hypothetical protein MT2810 |
| mtb\_smORF244\_3357378\_3357554\_plus | Uncharacterised protein |
| mtb\_smORF245\_3394842\_3395126\_plus | Uncharacterised protein |
| mtb\_smORF246\_3421278\_3421430\_plus | putative secreted protein |
| mtb\_smORF247\_3421500\_3421640\_plus | ---NA--- |
| mtb\_smORF248\_3486336\_3486512\_plus | hypothetical protein |
| mtb\_smORF249\_3494538\_3494783\_plus | pyridoxamine 5'-phosphate oxidase family protein |
| mtb\_smORF250\_3547335\_3547613\_plus | Uncharacterised protein |
| mtb\_smORF251\_3556749\_3556973\_plus | Uncharacterised protein |
| mtb\_smORF252\_3593562\_3593852\_plus | acetyltransferase |
| mtb\_smORF253\_3640275\_3640493\_plus | predicted protein |
| mtb\_smORF254\_3661107\_3661241\_plus | hypothetical protein MT3378 |
| mtb\_smORF255\_3700344\_3700643\_plus | ---NA--- |
| mtb\_smORF256\_3841347\_3841610\_plus | histone acetyltransferase |
| mtb\_smORF257\_3849735\_3849797\_plus | ---NA--- |
| mtb\_smORF258\_3874875\_3875063\_plus | ---NA--- |
| mtb\_smORF259\_3892986\_3893186\_plus | ---NA--- |
| mtb\_smORF260\_3906912\_3907121\_plus | ---NA--- |
| mtb\_smORF261\_4018101\_4018274\_plus | Uncharacterised protein |
| mtb\_smORF262\_4075560\_4075682\_plus | transmembrane protein |
| mtb\_smORF263\_4100832\_4101059\_plus | ---NA--- |
| mtb\_smORF264\_4211856\_4212122\_plus | Uncharacterised protein |
| mtb\_smORF265\_4288068\_4288283\_plus | ---NA--- |
| mtb\_smORF266\_4310811\_4311032\_plus | MULTISPECIES: hypothetical protein |
| mtb\_smORF267\_4317432\_4317602\_plus | hypothetical protein CAB90\_04306 |
| mtb\_smORF268\_4329555\_4329818\_plus | ---NA--- |
| mtb\_smORF269\_4329834\_4330067\_plus | hypothetical protein BN9982\_690009 |
| mtb\_smORF270\_4410873\_4411166\_plus | 50S ribosomal protein L34 |
| mtb\_smORF271\_4405167\_4405379\_- | Uncharacterised protein |
| mtb\_smORF272\_4336374\_4336439\_- | ---NA--- |
| mtb\_smORF273\_4323384\_4323542\_- | Uncharacterised protein |
| mtb\_smORF274\_4316550\_4316720\_- | ---NA--- |
| mtb\_smORF275\_4287912\_4288190\_- | ---NA--- |
| mtb\_smORF276\_4281483\_4281662\_- | ---NA--- |
| mtb\_smORF277\_4266759\_4267001\_- | Uncharacterised protein |
| mtb\_smORF278\_4218675\_4218977\_- | ---NA--- |
| mtb\_smORF279\_4169397\_4169612\_- | ---NA--- |
| mtb\_smORF280\_4077711\_4077884\_- | TetR/AcrR family transcriptional regulator |
| mtb\_smORF281\_3926334\_3926630\_- | Uncharacterised protein |
| mtb\_smORF282\_3892131\_3892313\_- | alpha/beta hydrolase |
| mtb\_smORF283\_3875853\_3876068\_- | ---NA--- |
| mtb\_smORF284\_3849024\_3849188\_- | Transposase |
| mtb\_smORF285\_3834783\_3834968\_- | ---NA--- |
| mtb\_smORF286\_3755328\_3755507\_- | transposase |
| mtb\_smORF287\_3742881\_3743039\_- | ---NA--- |
| mtb\_smORF288\_3642963\_3643178\_- | conserved hypothetical protein |
| mtb\_smORF289\_3558798\_3558977\_- | predicted protein |
| mtb\_smORF290\_3551046\_3551282\_- | Uncharacterised protein |
| mtb\_smORF291\_3550122\_3550337\_- | ---NA--- |
| mtb\_smORF292\_3511314\_3511505\_- | Uncharacterised protein |
| mtb\_smORF293\_3414936\_3415118\_- | hypothetical protein DSI80\_14455, partial |
| mtb\_smORF294\_3378495\_3378662\_- | PPE family protein |
| mtb\_smORF295\_3376749\_3377036\_- | PPE family protein |
| mtb\_smORF296\_3310608\_3310820\_- | putative glycosyl transferase |
| mtb\_smORF297\_3310272\_3310379\_- | GDP-L-fucose synthase |
| mtb\_smORF298\_3241926\_3242057\_- | ---NA--- |
| mtb\_smORF299\_3187503\_3187763\_- | Uncharacterised protein |
| mtb\_smORF300\_3167964\_3168116\_- | hypothetical protein I552\_4634 |
| mtb\_smORF301\_3123537\_3123692\_- | Putative CRISPR-associated RNAse Cas2 |
| mtb\_smORF302\_3119097\_3119228\_- | ---NA--- |
| mtb\_smORF303\_2982054\_2982338\_- | ---NA--- |
| mtb\_smORF304\_2949342\_2949599\_- | acyl-[acyl-carrier protein] desaturase desA1 |
| mtb\_smORF305\_2882070\_2882189\_- | ---NA--- |
| mtb\_smORF306\_2850843\_2851067\_- | hypothetical protein |
| mtb\_smORF307\_2692104\_2692337\_- | ---NA--- |
| mtb\_smORF308\_2680008\_2680226\_- | hypothetical protein BN9982\_240015 |
| mtb\_smORF309\_2637165\_2637443\_- | Uncharacterised protein |
| mtb\_smORF310\_2632362\_2632565\_- | Uncharacterised protein |
| mtb\_smORF311\_2614068\_2614352\_- | Uncharacterised protein |
| mtb\_smORF312\_2582760\_2582975\_- ---NA--- | |
| mtb\_smORF313\_2555925\_2556146\_- | Uncharacterised protein |
| mtb\_smORF314\_2447991\_2448221\_- | Uncharacterised protein |
| mtb\_smORF315\_2367111\_2367410\_- | PPE family protein |
| mtb\_smORF316\_2365230\_2365466\_- | MarR family transcriptional regulator |
| mtb\_smORF317\_2357907\_2358206\_- | PE family protein |
| mtb\_smORF318\_2357535\_2357693\_- | Uncharacterised protein |
| mtb\_smORF319\_2343960\_2344172\_- | Uncharacterised protein |
| mtb\_smORF320\_2307009\_2307239\_- | polyketide synthase |
| mtb\_smORF321\_2233881\_2234051\_- | dehydrogenase |
| mtb\_smORF322\_2228655\_2228828\_- | LysR family transcriptional regulator |
| mtb\_smORF323\_2198418\_2198600\_- | MULTISPECIES: hypothetical protein |
| mtb\_smORF324\_2152953\_2153174\_- | Uncharacterised protein |
| mtb\_smORF325\_2150826\_2150999\_- | ---NA--- |
| mtb\_smORF326\_1852071\_1852304\_- | hypothetical protein IU15\_06080 |
| mtb\_smORF327\_1764816\_1765025\_- | ---NA--- |
| mtb\_smORF328\_1728402\_1728608\_- | ---NA--- |
| mtb\_smORF329\_1710681\_1710890\_- | Uncharacterised protein |
| mtb\_smORF330\_1696398\_1696574\_- | class I SAM-dependent methyltransferase |
| mtb\_smORF331\_1692708\_1692989\_- | hypothetical protein |
| mtb\_smORF332\_1563486\_1563707\_- | hypothetical protein MRGA327\_08695 |
| mtb\_smORF333\_1539177\_1539389\_- | ---NA--- |
| mtb\_smORF334\_1517304\_1517492\_- | acyl-CoA dehydrogenase family protein |
| mtb\_smORF335\_1476507\_1476719\_- | hypothetical protein DFS55\_17855 |
| mtb\_smORF336\_1417395\_1417646\_- | Hypothetical protein ERS027665\_01283 |
| mtb\_smORF337\_1384146\_1384337\_- | ---NA--- |
| mtb\_smORF338\_1340601\_1340828\_- | Uncharacterised protein |
| mtb\_smORF339\_1272036\_1272167\_- ---NA--- | |
| mtb\_smORF340\_1180509\_1180763\_- | ---NA--- |
| mtb\_smORF341\_1176978\_1177262\_- | Uncharacterised protein |
| mtb\_smORF342\_1163793\_1164014\_- | hypothetical protein CAB90\_01187 |
| mtb\_smORF343\_1114173\_1114382\_- | methyltransferase |
| mtb\_smORF344\_1073823\_1074104\_- | Uncharacterised protein |
| mtb\_smORF345\_1057173\_1057391\_- | secreted antigen 85-C FbpC\_2 |
| mtb\_smORF346\_1024017\_1024280\_- | Uncharacterised protein |
| mtb\_smORF347\_986022\_986270\_- | ---NA--- |
| mtb\_smORF348\_948573\_948773\_- | Uncharacterized protein BCGR\_0947 |
| mtb\_smORF349\_944589\_944888\_- | ---NA--- |
| mtb\_smORF350\_934293\_934481\_- | CocE/NonD family hydrolase |
| mtb\_smORF351\_874470\_874658\_- | ---NA--- |
| mtb\_smORF352\_835059\_835205\_- | ---NA--- |
| mtb\_smORF353\_759129\_759299\_- | ---NA--- |
| mtb\_smORF354\_718137\_718388\_- | Uncharacterised protein |
| mtb\_smORF355\_710769\_711065\_- | ---NA--- |
| mtb\_smORF356\_704475\_704672\_- | Uncharacterised protein |
| mtb\_smORF357\_688293\_688538\_- | Uncharacterised protein |
| mtb\_smORF358\_653820\_653876\_- | ---NA--- |
| mtb\_smORF359\_612216\_612362\_- | ---NA--- |
| mtb\_smORF360\_610935\_611051\_- | ---NA--- |
| mtb\_smORF361\_551580\_551879\_- | Uncharacterized protein conserved in bacteria |
| mtb\_smORF362\_476250\_476477\_- | ---NA--- |
| mtb\_smORF363\_289002\_289172\_- | ---NA--- |
| mtb\_smORF364\_274710\_274862\_- | ---NA--- |
| mtb\_smORF365\_258420\_258656\_- | ---NA--- |
| mtb\_smORF366\_258123\_258383\_- | butyryl-CoA dehydrogenase |
| mtb\_smORF367\_230466\_230765\_- | Uncharacterised protein |
| mtb\_smORF368\_156399\_156680\_- | Secreted antigen 85-C FbpC (85C) (antigen 85 complex C) (Ag58C) (mycolyl transferase 85C) (fibronectin-binding protein C) |
| mtb\_smORF369\_65400\_65687\_- | Uncharacterised protein |
| mtb\_smORF370\_57930\_58211\_- | Uncharacterised protein |
| mtb\_smORF371\_31824\_31967\_- | Uncharacterised protein |
| mtb\_smORF372\_12360\_12569\_- | Uncharacterised protein |
| mtb\_smORF373\_1713\_1889\_- | Uncharacterised protein |
| mtb\_smORF374\_4321277\_4321486\_- | Uncharacterised protein |
| mtb\_smORF375\_4320254\_4320433\_- | Uncharacterised protein |
| mtb\_smORF376\_4319855\_4319947\_- | Uncharacterised protein |
| mtb\_smORF377\_4317521\_4317652\_- | Transposase (fragment) |
| mtb\_smORF378\_4278185\_4278301\_- | twitching motility protein PilT |
| mtb\_smORF379\_4205516\_4205779\_- | Uncharacterised protein |
| mtb\_smORF380\_4190276\_4190575\_- | PPE family protein |
| mtb\_smORF381\_4172792\_4173025\_- | ---NA--- |
| mtb\_smORF382\_3987248\_3987463\_- | short chain dehydrogenase |
| mtb\_smORF383\_3950609\_3950824\_- | Uncharacterised protein |
| mtb\_smORF384\_3939290\_3939511\_- | ---NA--- |
| mtb\_smORF385\_3930815\_3931006\_- | Uncharacterised protein |
| mtb\_smORF386\_3905702\_3905800\_- | Uncharacterised protein |
| mtb\_smORF387\_3880013\_3880189\_- | Uncharacterised protein |
| mtb\_smORF388\_3846995\_3847231\_- | transposase |
| mtb\_smORF389\_3846053\_3846271\_- | integrase |
| mtb\_smORF390\_3842069\_3842305\_- | transposase |
| mtb\_smORF391\_3755234\_3755524\_- | hypothetical protein MTBK\_35390 |
| mtb\_smORF392\_3642890\_3643087\_- | hypothetical protein, partial |
| mtb\_smORF393\_3600602\_3600817\_- | ---NA--- |
| mtb\_smORF394\_3548867\_3549085\_- | ---NA--- |
| mtb\_smORF395\_3521960\_3522079\_- | ---NA--- |
| mtb\_smORF396\_3494330\_3494539\_- | PPE family protein |
| mtb\_smORF397\_3493538\_3493804\_- | hypothetical protein |
| mtb\_smORF398\_3491702\_3491866\_- | Uncharacterised protein |
| mtb\_smORF399\_3480641\_3480865\_- | ---NA--- |
| mtb\_smORF400\_3457769\_3458071\_- | Uncharacterised protein |
| mtb\_smORF401\_3350990\_3351262\_- | 2-hydroxyhepta-2%2C4-diene-1%2C7-dioate isomerase |
| mtb\_smORF402\_3276170\_3276334\_- | ---NA--- |
| mtb\_smORF403\_3174824\_3175090\_- | ---NA--- |
| mtb\_smORF404\_3119255\_3119551\_- | Uncharacterised protein |
| mtb\_smORF405\_2971994\_2972161\_- | helix-turn-helix transcriptional regulator |
| mtb\_smORF406\_2775296\_2775433\_- | ---NA--- |
| mtb\_smORF407\_2725595\_2725861\_- | LysR family transcriptional regulator |
| mtb\_smORF408\_2584922\_2585122\_- | ---NA--- |
| mtb\_smORF409\_2581424\_2581705\_- | Uncharacterised protein |
| mtb\_smORF410\_2580038\_2580253\_- | excalibur calcium-binding domain-containing protein |
| mtb\_smORF411\_2578853\_2579137\_- | DUF3761 domain-containing protein |
| mtb\_smORF412\_2552120\_2552311\_- | Uncharacterised protein |
| mtb\_smORF413\_2528924\_2529136\_- | ---NA--- |
| mtb\_smORF414\_2498513\_2498743\_- | hypothetical protein, partial |
| mtb\_smORF415\_2487413\_2487706\_- | Uncharacterised protein |
| mtb\_smORF416\_2434421\_2434666\_- | ---NA--- |
| mtb\_smORF417\_2402093\_2402158\_- | ---NA--- |
| mtb\_smORF418\_2387969\_2388175\_- | PE family protein |
| mtb\_smORF419\_2367509\_2367751\_- | Uncharacterised protein |
| mtb\_smORF420\_2270447\_2270563\_- | hypothetical protein MT2083 |
| mtb\_smORF421\_2260325\_2260489\_- | Uncharacterised protein |
| mtb\_smORF422\_2219540\_2219755\_- | ---NA--- |
| mtb\_smORF423\_2150765\_2151028\_- | ---NA--- |
| mtb\_smORF424\_2138909\_2139211\_- | hypothetical protein I917\_13400 |
| mtb\_smORF425\_2124830\_2125042\_- | bacterioferritin-associated ferredoxin |
| mtb\_smORF426\_2056256\_2056546\_- | Uncharacterised protein |
| mtb\_smORF427\_2052791\_2053009\_- | ---NA--- |
| mtb\_smORF428\_2038835\_2039026\_- | ---NA--- |
| mtb\_smORF429\_1999790\_2000089\_- | ---NA--- |
| mtb\_smORF430\_1712057\_1712257\_- | Uncharacterised protein |
| mtb\_smORF431\_1697837\_1698013\_- | ---NA--- |
| mtb\_smORF432\_1535510\_1535788\_- | hypothetical protein |
| mtb\_smORF433\_1518452\_1518706\_- | predicted protein |
| mtb\_smORF434\_1473134\_1473394\_- | Uncharacterised protein |
| mtb\_smORF435\_1222898\_1223077\_- | ---NA--- |
| mtb\_smORF436\_1176011\_1176265\_- | Mobile element protein |
| mtb\_smORF437\_1113575\_1113838\_- | ---NA--- |
| mtb\_smORF438\_1101443\_1101733\_- | ---NA--- |
| mtb\_smORF439\_1096526\_1096720\_- | PE-PGRS family protein |
| mtb\_smORF440\_1034606\_1034788\_- | ---NA--- |
| mtb\_smORF441\_986900\_987136\_- | hypothetical protein BN9982\_40019 |
| mtb\_smORF442\_980207\_980344\_- | Protein of uncharacterised function (DUF3071) |
| mtb\_smORF443\_947390\_947593\_- | Uncharacterised protein |
| mtb\_smORF444\_937730\_938020\_- | ---NA--- |
| mtb\_smORF445\_803327\_803581\_- | ---NA--- |
| mtb\_smORF446\_799976\_800272\_- | putative transcriptional regulator |
| mtb\_smORF447\_703220\_703450\_- | ---NA--- |
| mtb\_smORF448\_559658\_559957\_- | ---NA--- |
| mtb\_smORF449\_528311\_528562\_- | Uncharacterised protein |
| mtb\_smORF450\_476264\_476458\_- | Uncharacterised protein |
| mtb\_smORF451\_351803\_352075\_- | ---NA--- |
| mtb\_smORF452\_272894\_273187\_- | ---NA--- |
| mtb\_smORF453\_260732\_261022\_- | ---NA--- |
| mtb\_smORF454\_78896\_79141\_- | Uncharacterised protein |
| mtb\_smORF455\_13610\_13903\_- | ---NA--- |
| mtb\_smORF456\_11123\_11341\_- | tyrosine-type recombinase/integrase |
| mtb\_smORF457\_4405207\_4405494\_- | hypothetical protein MT4035.1 |
| mtb\_smORF458\_4340077\_4340364\_- | Uncharacterised protein |
| mtb\_smORF459\_4336096\_4336377\_- | Uncharacterised protein |
| mtb\_smORF460\_4316593\_4316793\_- | Uncharacterised protein |
| mtb\_smORF461\_4291459\_4291614\_- | hypothetical protein TBHG\_04180 |
| mtb\_smORF462\_4285720\_4285974\_- | Uncharacterised protein |
| mtb\_smORF463\_4198756\_4199004\_- | Uncharacterised protein |
| mtb\_smORF464\_4093393\_4093536\_- | conserved hypothetical protein |
| mtb\_smORF465\_4062340\_4062528\_- | ---NA--- |
| mtb\_smORF466\_3892516\_3892767\_- | hypothetical protein MRGA327\_21430 |
| mtb\_smORF467\_3875782\_3875988\_- | ---NA--- |
| mtb\_smORF468\_3874927\_3875052\_- | Uncharacterised protein |
| mtb\_smORF469\_3849226\_3849330\_- | Uncharacterised protein |
| mtb\_smORF470\_3846682\_3846957\_- | hypothetical protein, partial |
| mtb\_smORF471\_3842716\_3842853\_- | Uncharacterised protein |
| mtb\_smORF472\_3703972\_3704127\_- | ---NA--- |
| mtb\_smORF473\_3500908\_3501093\_- | Uncharacterised protein |
| mtb\_smORF474\_3494317\_3494424\_- | Conserved protein of uncharacterised function%2C possible transposase remnant |
| mtb\_smORF475\_3483844\_3484065\_- | Uncharacterised protein |
| mtb\_smORF476\_3435718\_3435855\_- | LLM class flavin-dependent oxidoreductase |
| mtb\_smORF477\_3317869\_3318135\_- | Uncharacterised protein |
| mtb\_smORF478\_3214492\_3214740\_- | ---NA--- |
| mtb\_smORF479\_3168154\_3168411\_- | Uncharacterised protein |
| mtb\_smORF480\_3121993\_3122226\_- | Uncharacterised protein |
| mtb\_smORF481\_3119305\_3119541\_- | Uncharacterised protein |
| mtb\_smORF482\_3042406\_3042630\_- | ---NA--- |
| mtb\_smORF483\_3034789\_3035001\_- | hypothetical protein |
| mtb\_smORF484\_2982406\_2982579\_- | Uncharacterised protein |
| mtb\_smORF485\_2973448\_2973633\_- | ---NA--- |
| mtb\_smORF486\_2969413\_2969604\_- | TIGR02611 family protein |
| mtb\_smORF487\_2759617\_2759919\_- | Uncharacterised protein |
| mtb\_smORF488\_2732893\_2733141\_- | Uncharacterised protein |
| mtb\_smORF489\_2655187\_2655309\_- | Uncharacterised protein |
| mtb\_smORF490\_2636950\_2637027\_- | Uncharacterised protein |
| mtb\_smORF491\_2619976\_2620272\_- | Uncharacterised protein |
| mtb\_smORF492\_2538550\_2538645\_- | hypothetical protein |
| mtb\_smORF493\_2453458\_2453709\_- | Uncharacterised protein |
| mtb\_smORF494\_2441659\_2441934\_- | Gp101 |
| mtb\_smORF495\_2398582\_2398773\_- | ---NA--- |
| mtb\_smORF496\_2393638\_2393796\_- | Uncharacterised protein |
| mtb\_smORF497\_2367259\_2367468\_- | Uncharacterised protein |
| mtb\_smORF498\_2365051\_2365125\_- | IS3 family transposase |
| mtb\_smORF499\_2268268\_2268513\_- | Uncharacterised protein |
| mtb\_smORF500\_2263039\_2263293\_- | HNH endonuclease domain-containing protein |
| mtb\_smORF501\_2260021\_2260260\_- | type ISP restriction/modification enzyme |
| mtb\_smORF502\_2259778\_2259906\_- | hypothetical protein BTB1458\_2229 |
| mtb\_smORF503\_2142388\_2142630\_- | Uncharacterised protein |
| mtb\_smORF504\_2125783\_2125986\_- | Uncharacterised protein |
| mtb\_smORF505\_2108848\_2109075\_- | predicted protein |
| mtb\_smORF506\_2059309\_2059608\_- | Uncharacterised protein |
| mtb\_smORF507\_2051134\_2051403\_- | Uncharacterised protein |
| mtb\_smORF508\_2030506\_2030676\_- | Conserved membrane protein of uncharacterised function |
| mtb\_smORF509\_1895959\_1896258\_- | ---NA--- |
| mtb\_smORF510\_1833346\_1833588\_- | Uncharacterised protein |
| mtb\_smORF511\_1789966\_1790184\_- | predicted protein |
| mtb\_smORF512\_1753405\_1753578\_- | PPE family protein |
| mtb\_smORF513\_1746958\_1747191\_- | Uncharacterised protein |
| mtb\_smORF514\_1710700\_1710936\_- | ---NA--- |
| mtb\_smORF515\_1693996\_1694262\_- | TDP-4-oxo-6-deoxy-D-glucose aminotransferase |
| mtb\_smORF516\_1681078\_1681287\_- | Conserved membrane protein of uncharacterised function |
| mtb\_smORF517\_1679059\_1679268\_- | ---NA--- |
| mtb\_smORF518\_1616365\_1616592\_- | transcriptional regulator |
| mtb\_smORF519\_1540723\_1540956\_- | Uncharacterised protein |
| mtb\_smORF520\_1530973\_1531197\_- | Uncharacterised protein |
| mtb\_smORF521\_1473370\_1473591\_- | ---NA--- |
| mtb\_smORF522\_1472059\_1472289\_- | PG1 protein |
| mtb\_smORF523\_1455094\_1455288\_- | ---NA--- |
| mtb\_smORF524\_1371481\_1371726\_- | ---NA--- |
| mtb\_smORF525\_1340818\_1340973\_- | Conserved membrane protein of uncharacterised function |
| mtb\_smORF526\_1240861\_1240962\_- | Uncharacterised protein |
| mtb\_smORF527\_1240081\_1240245\_- | hypothetical protein |
| mtb\_smORF528\_1205755\_1205970\_- | ---NA--- |
| mtb\_smORF529\_1178437\_1178649\_- | DUF222 domain-containing protein |
| mtb\_smORF530\_1166896\_1167045\_- | ---NA--- |
| mtb\_smORF531\_1160095\_1160358\_- | transposase |
| mtb\_smORF532\_1135432\_1135500\_- | ---NA--- |
| mtb\_smORF533\_1093105\_1093254\_- | Uncharacterised protein |
| mtb\_smORF534\_1073959\_1074129\_- | ---NA--- |
| mtb\_smORF535\_1057300\_1057530\_- | mycolyltransferase |
| mtb\_smORF536\_1003831\_1004046\_- | ---NA--- |
| mtb\_smORF537\_996232\_996399\_- | ---NA--- |
| mtb\_smORF538\_962800\_962964\_- | ---NA--- |
| mtb\_smORF539\_948601\_948876\_- | ---NA--- |
| mtb\_smORF540\_850342\_850512\_- | transposase |
| mtb\_smORF541\_841015\_841287\_- | ---NA--- |
| mtb\_smORF542\_835015\_835266\_- | 3-hydroxyisobutyrate dehydrogenase |
| mtb\_smORF543\_799843\_800061\_- | ---NA--- |
| mtb\_smORF544\_747835\_748083\_- | ---NA--- |
| mtb\_smORF545\_733438\_733665\_- | hypothetical protein MHPYR\_280009 |
| mtb\_smORF546\_704446\_704649\_- | oxidoreductase |
| mtb\_smORF547\_640723\_640974\_- | Conserved protein of uncharacterised function%2C possible antitoxin |
| mtb\_smORF548\_612565\_612813\_- | Uncharacterised protein |
| mtb\_smORF549\_591481\_591777\_- | hypothetical protein BIS44\_4427 |
| mtb\_smORF550\_565375\_565590\_- | ---NA--- |
| mtb\_smORF551\_545188\_545418\_- | Uncharacterised protein |
| mtb\_smORF552\_542014\_542268\_- | ---NA--- |
| mtb\_smORF553\_483820\_484014\_- | hypothetical protein |
| mtb\_smORF554\_296581\_296826\_- | ---NA--- |
| mtb\_smORF555\_180805\_181029\_- | PE-PGRS family protein |
| mtb\_smORF556\_48034\_48243\_- | ---NA--- |
| mtb\_smORF557\_13024\_13176\_- | Uncharacterised protein |