**Table S1.** Predicted *M. tuberculosis* H37Rv and *M. bovis* BCG gene targets based on homology to human target assays

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Human Target Class | No. of Compounds | Putative *Mycobacterium* Target | Accession No. | Essentiality |
|  | BCG | H37Rv | Gene | Product | M. bovis BCG | MTB H37Rv |  |
| Kinase | 35 | 8 | pknA | transmembrane serine/threonine-protein kinase A | YP\_976148.1 | NP\_214529.1 | Essential |
|  |  |  | pknB | transmembrane serine/threonine-protein kinase B | YP\_976147.1 | NP\_214528.1 | Essential |
|  |  |  | pknD | Ser/Thr protein kinase  | YP\_977078.1 | NP\_215446.1 | NE |
|  |  |  | pknH | putative transmembrane serine/threonine-protein kinase H | YP\_977417.1 | NP\_215782.1 | NE |
|  |  |  | pknJ | putative transmembrane serine/threonine-protein kinase J | YP\_978197.1 | NP\_216604.1 | NE |
|  |  |  | pknL | putative transmembrane serine/threonine-protein kinase L | YP\_978280.1 | NP\_216692.1 | NE |
|  |  | None | pknF | anchored-membrane serine/threonine-protein kinase F | YP\_977877.1 | NP\_216262.1 | NE |
|  |  | None | pknK | putative serine/threonine-protein kinase transcriptional regulatory protein K  | YP\_979189.1 | NP\_217596.1 | NE |
| Other Enzyme | 1 | 0 | aao | Putative D-amino acid oxidase | YP\_978034.1 |  | NE |
|  | 5 | 2 | amiB2 | amidase | YP\_977414.1 | NP\_215779.1 | NE |
|  | 2 | 1 | aofH | putative flavin-containing monoamine oxidase | YP\_979728.1 | NP\_217686.1 | NE |
|  | 2 | 0 | BCG\_1212c | NAD-dependent deacetylase | YP\_977305.1 |  | NE |
|  | 1 | 0 | BCG\_1741c | Putative catechol-O-methyltransferase | YP\_977833.1 |  | NE |
|  | 9 | 1 | mycP1 | Protease | YP\_980017.1 | NP\_218400.1 | NE |
|  | 1 | 0 | ephB | Putative epoxide hydrolase | YP\_978066.1 |  | NE |
|  | 2 | 0 | fabG | 3-ketoacyl-(acyl-carrier-protein) reductase | YP\_977504.1 |  | Essential |
|  | 3 | 1 | pyrD | Dihydroorotate dehydrogenase 2 | YP\_978245.1 | NP\_216655.1 | NE |
| Cytochrome | 49 | 13 | cyp132 | putative cytochrome P450 132 | YP\_977547.1 | YP\_177807.1 | NE |
|  |  |  | cyp136 | putative cytochrome P450 136 | YP\_979168.1 | NP\_217575.1 | NE |
| GPCR | 111 | 24 | No homolog |  |  |  |  |
| Ion Channel | 31 | 6 | No homolog |  |  |  |  |
| Nuclear Receptor | 20 | 9 | No homolog |  |  |  |  |
| Other Receptor | 6 | 2 | No homolog |  |  |  |  |
| Other Enzyme | 3 | 8 | No homolog |  |  |  |  |
| Transporter  | 9 | 4 | No homolog |  |  |  |  |
| Total | 180 | 54 |  |  |  |  |  |

*M. tuberculosis* H37Rv and *M. bovis* BCG homologs determined by BLASTP [[1](#_ENREF_1)] searches using human targets.

Human target classes are defined in the text. Some compounds may be active across more than one target class.

Essentiality scoring based on [[2](#_ENREF_2)]. NE = No Evidence from these sources.

**References**

1. Altschul SF, Madden TL, Schaffer AA, Zhang J, Zhang Z, et al. (1997) Gapped BLAST and PSI-BLAST: a new generation of protein database search programs. Nucleic Acids Res 25: 3389-3402.

2. Sassetti CM, Boyd DH, Rubin EJ (2003) Genes required for mycobacterial growth defined by high density mutagenesis. Mol Microbiol 48: 77-84.