

SUPPLEMENTARY INFORMATION

Atica Moosa, Dirk A. Lamprecht, Kriti Arora, Clifton E. Barry III, Helena I. M. Boshoff,
Thomas R. Ioerger, Adrie J. C. Steyn, Valerie Mizrahi, and Digby F. Warner.

Susceptibility of *Mycobacterium tuberculosis* cytochrome *bd* oxidase mutants to compounds
targeting the terminal respiratory oxidase, cytochrome *c*

Table S1. *M. tuberculosis* strains used in this study

Strain name	Genotype	Whole-genome sequence analysis	Reference
H37RvMA	Wild-type; ATCC27294	See reference (1)	(1)
cydKO	<i>cydC::aph</i> ; constructed in H37Rv (ATCC27294)	ND	(2, 3)
Δ <i>cydA</i>	Allelic exchange mutant of H37RvMA carrying <i>cydA</i> deletion allele from base pair 121 to 1329 resulting in 1209 bp in-frame deletion in the 1458 bp <i>cydA</i> (<i>Rv1623c</i>) gene.	Rv1616:F77L, Rv1617/ <i>pykA</i> :R17F, (Rv1628c:T126T)	This study
Δ <i>cydAB</i>	Allelic exchange mutant of H37RvMA carrying <i>cydAB</i> deletion allele from base pair 121 of <i>cydA</i> to 2418 of <i>cydB</i> resulting in 2298 bp deletion in the <i>cydA-cydB</i> locus (<i>Rv1623c-Rv1622c</i>)	<i>pepN</i> :V526A, <i>ppsE</i> :G146*	This study

SUPPLEMENTARY REFERENCES

1. **Ioerger TR, Feng Y, Ganesula K, Chen X, Dobos KM, Fortune S, Jacobs WR, Jr., Mizrahi V, Parish T, Rubin E, Sasseti C, Sacchetti JC.** 2010. Variation among genome sequences of H37Rv strains of *Mycobacterium tuberculosis* from multiple laboratories. *J Bacteriol* **192**:3645-3653.
2. **Arora K, Ochoa-Montano B, Tsang PS, Blundell TL, Dawes SS, Mizrahi V, Bayliss T, Mackenzie CJ, Cleghorn LA, Ray PC, Wyatt PG, Uh E, Lee J, Barry CE, 3rd, Boshoff HI.** 2014. Respiratory flexibility in response to inhibition of cytochrome C oxidase in *Mycobacterium tuberculosis*. *Antimicrob Agents Chemother* **58**:6962-6965.
3. **Shi L, Sohaskey CD, Kana BD, Dawes S, North RJ, Mizrahi V, Gennaro ML.** 2005. Changes in energy metabolism of *Mycobacterium tuberculosis* in mouse lung and under *in vitro* conditions affecting aerobic respiration. *Proc Natl Acad Sci U S A* **102**:15629-15634.

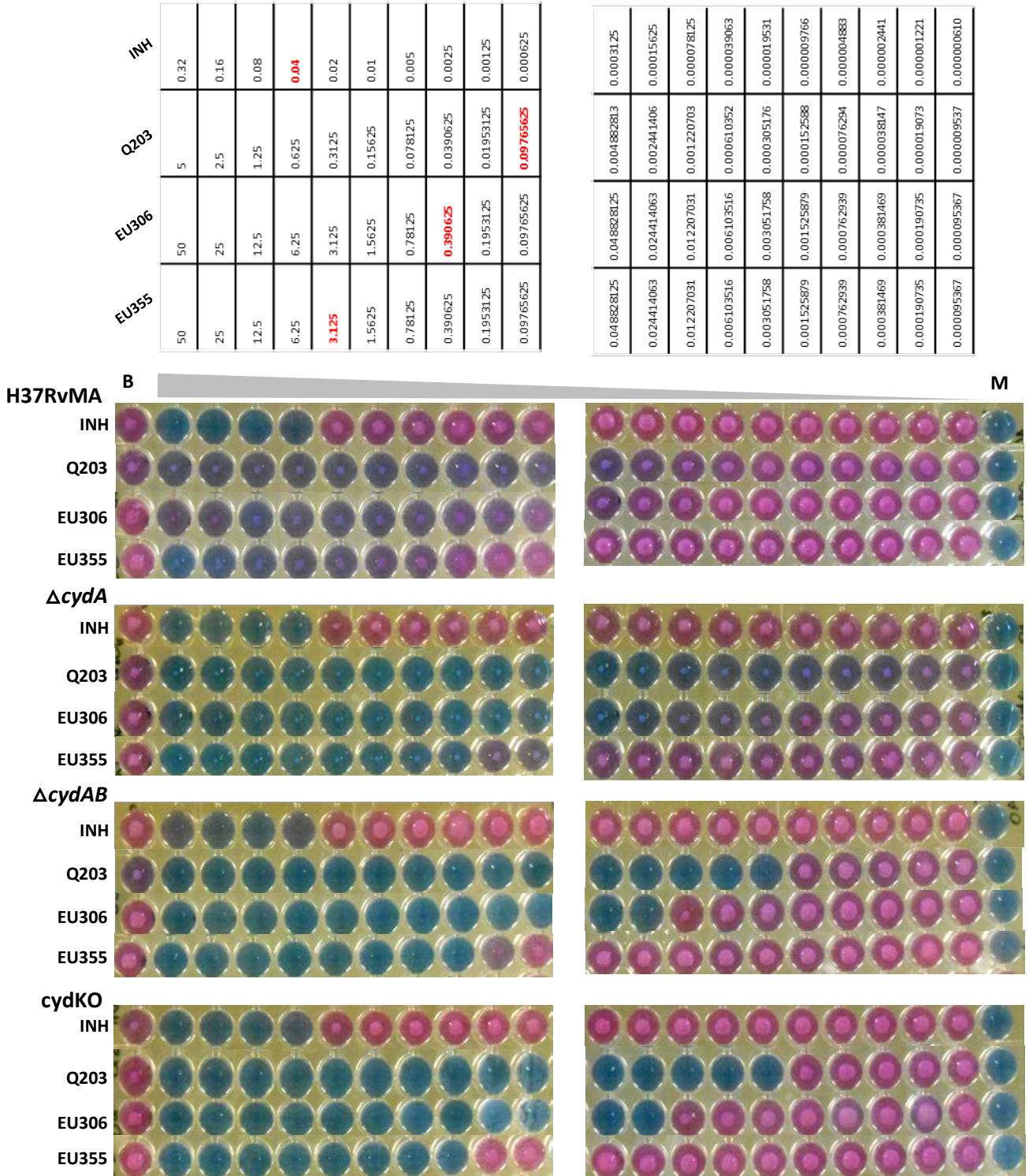


FIG S1 Treatment of *M. tuberculosis* H37Rv and *cyd* operon mutants with inhibitors of the cytochrome bc_1 complex confirms inhibition of Alamar Blue reduction in the wild-type strain. This effect is eliminated in the *cyd* operon mutants which retain full susceptibility over the 14-day assay. Isoniazid (INH) is included as a control; note also that the left-most column on each plate contains bacilli only (**B**, no drug control) and the right-most column is the media-only (**M**) control. Drug concentrations ($\mu\text{g}/\text{ml}$) are shown in the tables above the plates; values in bold red typeface indicate the MICs inferred for wild-type H37RvMA.