

TABLE S1. Genes differentially expressed in aerobically grown $\Delta qcrCAB::hyg$ mutant of *M. smegmatis*

| ID ^a | Gene | TIGR annotation ^b | Function ^c | M ^d | P value | Class ^e |
|--------------------------|--------------|------------------------------|---|----------------|---------|--------------------|
| Upregulated genes | | | | | | |
| ribA | <i>ribA2</i> | MSMEG3082 | Probable riboflavin biosynthesis protein | -2.301 | 0.0020 | 7 |
| ML2274 | | MSMEG3498 | Probable conserved secreted protein | -1.914 | 0.0072 | 3 |
| mihF | <i>mihF</i> | MSMEG3063 | Putative integration host factor | -1.764 | 0.0003 | 2 |
| glgC | <i>glgC</i> | MSMEG5067 | glucose-1-phosphate adenyl-transferase | -1.753 | 0.0072 | 7 |
| ML1835 | | MSMEG6527 | CHP | -1.556 | 0.0030 | 10 |
| ML0510 | | MSMEG3035 | CHP | -1.444 | 0.0004 | 10 |
| ML0886 | | MSMEG4257 | possible glycosyl transferase | -1.430 | 0.0024 | 7 |
| ML1312 | | MSMEG4598 | CHP | -1.229 | 0.0001 | 10 |
| argD-g | <i>argD</i> | MSMEG2446 | probable acetylornithine aminotransferase | -1.027 | 0.0033 | 7 |
| gabD-q | <i>gabD</i> | MSMEG2554 | probable aldehyde dehydrogenase (NAD-dependent) | -1.005 | 0.0052 | 7 |
| Rv3134c | <i>uspL</i> | MSMEG5230 | Universal stress protein | -0.990 | 0.0098 | 10 |
| Rv1623c | <i>cydA</i> | MSMEG3243 | Cytochrome <i>bd</i> oxidase subunit I | -0.931 | 0.0069 | 7 |
| ML1926 | | MSMEG0828 | putative tuberculin-related protein | -0.915 | 0.0058 | 3 |
| Rv1592c | | MSMEG3205 | CHP | -0.878 | 0.0016 | 10 |
| ML1783 | | MSMEG4344 | possible transcriptional regulatory protein | -0.849 | 0.0080 | 9 |
| PPE-b | <i>PPE</i> | MSMEG0063 | PPE family domain | -0.807 | 0.0003 | 6 |
| ML0663 | | MSMEG2085 | CHP | -0.804 | 0.0016 | 10 |
| argD-e | <i>argD</i> | MSMEG2971 | probable acetylornithine aminotransferase | -0.767 | 0.0030 | 7 |
| atpH | <i>atpH</i> | MSMEG4925 | ATP synthase delta chain | -0.741 | 0.0024 | 7 |
| ML0990 | | MSMEG2732 | CHP | -0.701 | 0.0066 | 10 |
| glpD-a | <i>glpD</i> | MSMEG6721 | glycerol-3-phosphate dehydrogenase | -0.683 | 0.0017 | 7 |
| menD | <i>menD</i> | MSMEG1225 | bifunctional menaquinone biosynthesis protein | -0.677 | 0.0072 | 7 |
| Rv3841 | <i>bfrB</i> | MSMEG6385 | bacterioferritin | -0.660 | 0.0062 | 7 |

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|----------------------------|--------------|-----------|---|--------|--------|----|
| bccA-c | | MSMEG1807 | biotin carboxy carrier protein & biotin carboxyl transferase | -0.641 | 0.0017 | 1 |
| purM | <i>purM</i> | MSMEG5766 | phosphoribosylformylglycinamide cyclo-ligase | -0.635 | 0.0082 | 7 |
| fas | <i>fas</i> | MSMEG0552 | fatty acid synthase | -0.633 | 0.0015 | |
| lpqF | <i>lpqF</i> | MSMEG6050 | probable conserved lipoprotein | -0.617 | 0.0062 | 3 |
| ML0759 | <i>fbiA</i> | MSMEG1829 | probable F420 biosynthesis protein | -0.611 | 0.0015 | 7 |
| gabD-y | <i>gabD</i> | MSMEG1497 | succinate-semialdehyde dehydrogenase | -0.600 | 0.0075 | 7 |
| glnA2-f | <i>glnA2</i> | MSMEG2596 | probable glutamine synthetase | -0.593 | 0.0026 | 7 |
| ML1094 | | MSMEG1104 | short chain type dehydrogenase/ reductase | -0.590 | 0.0024 | 7 |
| ML0596-a | <i>csd</i> | MSMEG4531 | probable cysteine desulfurase | -0.576 | 0.0020 | 7 |
| ML2203 | | MSMEG3807 | CHP | -0.552 | 0.0020 | 10 |
| ML2289 | | none | CHP | -0.537 | 0.0020 | 10 |
| sdhC | <i>sdhC</i> | MSMEG1669 | succinate dehydrogenase | -0.528 | 0.0082 | 7 |
| lysX | <i>lysX</i> | MSMEG6531 | lysyl-tRNA synthetase | -0.501 | 0.0070 | 2 |
| phoT | <i>phoT</i> | MSMEG2124 | phosphate transport ATP-binding protein | -0.496 | 0.0066 | 3 |
| ML2053 | <i>adhA</i> | MSMEG0251 | probable alcohol dehydrogenase | -0.477 | 0.0041 | 7 |
| uvrD2 | <i>uvrD2</i> | MSMEG1956 | ATP-dependent DNA helicase | -0.476 | 0.0051 | 2 |
| gabD-e | <i>gabD</i> | MSMEG6662 | aldehyde dehydrogenase family protein 2-amino-4-hydroxy-6-hydroxymethylidihydropteridine pyrophosphokinase | -0.469 | 0.0062 | 7 |
| folK | <i>folK</i> | MSMEG6064 | probable tRNA delta(2)-isopentenylpyrophosphate transferase | -0.443 | 0.0071 | 7 |
| miaA | <i>miaA</i> | MSMEG6675 | | -0.383 | 0.0100 | 7 |
| Downregulated genes | | | | | | |
| lytB2 | <i>lytB</i> | MSMEG5208 | probable LytB-related protein, LytB2 | 3.316 | 0.0002 | 3 |
| xseA | <i>xseA</i> | MSMEG5210 | exo-deoxyribonuclease VII, large subunit | 2.737 | 0.0003 | 2 |
| ML2088-a | | MSMEG4807 | putative cytochrome P450 | 2.039 | 0.0004 | 7 |
| ctpC-a | | MSMEG5384 | cadmium-translocating P-type ATPase | 1.789 | 0.0081 | 3 |

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|----------|--------------|-----------|--|-------|--------|----|
| rpoT | <i>sigA</i> | MSMEG2759 | RNA polymerase sigma factor, SigA | 1.513 | 0.0000 | 2 |
| rplE | <i>rplE</i> | MSMEG1464 | ribosomal protein L5 | 1.198 | 0.0002 | 2 |
| ML2661-e | <i>fadD7</i> | MSMEG3702 | Fatty acid CoA ligase, FadD7 | 1.197 | 0.0051 | 1 |
| fpg | <i>fpg</i> | MSMEG2417 | formamidopyrimidine-DNA glycosylase | 0.961 | 0.0078 | 7 |
| ML1750 | | MSMEG2202 | CHP | 0.922 | 0.0098 | 10 |
| uvrB | <i>uvrB</i> | MSMEG3820 | excinuclease ABC, B subunit | 0.843 | 0.0057 | 2 |
| Rv1009 | <i>rpfB</i> | MSMEG5419 | probable resuscitation-promoting factor B, RpfB | 0.835 | 0.0027 | 3 |
| uspE | <i>uspB</i> | MSMEG4462 | probable sugar ABC transporter | 0.810 | 0.0024 | 3 |
| ML0115 | | MSMEG6327 | CHP | 0.807 | 0.0051 | 10 |
| ML2661-h | <i>fadD7</i> | MSMEG4041 | Fatty acid CoA ligase, FadD7 | 0.805 | 0.0002 | 1 |
| Rv2393 | | MSMEG4522 | CHP | 0.771 | 0.0041 | 10 |
| ML2491-c | | MSMEG4370 | CHP | 0.760 | 0.0033 | 10 |
| ML0815 | | MSMEG1939 | transcriptional regulator, TetR family domain | 0.725 | 0.0002 | 9 |
| rpsL | <i>rpsL</i> | MSMEG1393 | ribosomal protein S12 | 0.724 | 0.0066 | 2 |
| ML0691-b | <i>dacB</i> | MSMEG1659 | probable D-alanyl-alanine carboxypeptidase | 0.720 | 0.0005 | 3 |
| ML0729 | | MSMEG1810 | CHP | 0.674 | 0.0039 | 10 |
| ML0093 | <i>glfT</i> | MSMEG5323 | bifunctional UDP-galactofuranosyl transferase | 0.668 | 0.0085 | 3 |
| gatA-b | <i>gatA</i> | MSMEG1078 | probable glutamyl-tRNA (GLN) amidotransferase | 0.668 | 0.0024 | 2 |
| atpD-c | <i>atpD</i> | MSMEG4939 | probable ATP synthase Beta chain | 0.660 | 0.0009 | 7 |
| trpS | <i>trpS</i> | MSMEG1655 | tryptophanyl-tRNA synthetase | 0.655 | 0.0020 | 2 |
| mce1A-a | <i>mce1A</i> | MSMEG6500 | host cell invasion | 0.650 | 0.0026 | 0 |
| ML2549 | | MSMEG0428 | CHP | 0.628 | 0.0029 | 10 |
| ML2620-b | <i>mmpL3</i> | MSMEG4733 | possible conserved transmembrane transport protein | 0.624 | 0.0024 | 3 |
| pdc-a | <i>pdc</i> | MSMEG4455 | probable pyruvate decarboxylase | 0.590 | 0.0027 | 7 |
| ML1115 | <i>lprB</i> | MSMEG1390 | possible lipoprotein | 0.581 | 0.0031 | 3 |
| ML0174 | <i>mpmA</i> | MSMEG5468 | DNA-binding response regulator (persistence) | 0.580 | 0.0016 | 9 |
| umaA2-a | <i>umaA</i> | MSMEG1199 | possible mycolic acid synthase | 0.476 | 0.0041 | 1 |

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|----------|--------------|-----------|--|-------|--------|---|
| ML1698 | | MSMEG5185 | conserved membrane protein | 0.464 | 0.0033 | 3 |
| ML2140 | | MSMEG5666 | transcriptional regulator, marR family | 0.460 | 0.0070 | 9 |
| ML2377 | <i>mmpS4</i> | MSMEG0373 | conserved membrane protein | 0.455 | 0.0073 | 3 |
| ML0243-b | <i>pks16</i> | MSMEG5415 | putative polyketide synthase | 0.440 | 0.0081 | 1 |
| ung | <i>ung</i> | MSMEG3668 | probable uracil-DNA glycosylase | 0.422 | 0.0079 | 2 |

^a Gene identifier as defined in the MIAME compliance file (<http://vbc.med.monash.edu.au/~powell/M.smegmatis>).

^b TIGR annotation (<http://www.tigr.org/tigr-scripts/CMR2/CMRHomePage.spl>)

^c Function as per Tuberculist and Leproma (<http://genolist.pasteur.fr>).

^d Log₂ of the fold ratio

^e Functional classification as per Tuberculist and Leproma. 1, Lipid metabolism; 2, Information pathways; 3, Cell wall & cell processes; 6, PE/PPE; 7, Intermediary metabolism & respiration; 9, Regulatory proteins; 10, Conserved hypotheticals.