**Table S1: DNA microarray data supplement to Tables 1 and 2. Additional data are listed in Tables 3 and 4.**

|  |  |
| --- | --- |
| **A. Genes whose expression is increased relative to WT-Y** | **Fold change in** |
| **MXAN ID** | **Description** | **WT-T** | ***asgB*** | ***dkx*** | ***xre228*** |
| **transporters, receptors, metal binding gene clusters** |
| MXAN\_1316 | putative TonB dependent receptor (BtuB, FepA, TomB-hemin, OM\_channels superfamily, ligand-gated channel) OM receptor | +8 | +24 | +13 | +5 |
| MXAN\_1317 | putative lipoprotein | +12 | +19 | +11 | +6 |
| MXAN\_1318 | hemin transport protein HemS (*hemS*) (ChuX\_HutX superfamily)  | +13 | +17 | +10 | +6 |
| MXAN\_1319 | hemin ABC transporter, periplasmic hemin-binding protein | +10 | +11 | +9 | +5 |
| MXAN\_1320 | hemin ABC transporter, permease protein (*hemU*) | +8 | +8 | +6 | +4 |
| MXAN\_1321 | hemin ABC transporter, ATP-binding protein | +13 | +10 | +6 | +6 |
| MXAN\_1688 | TonB family protein | +6 | +20 | +16 | +5 |
| MXAN\_1689 | conserved hypothetical protein | +17 | +17 | +11 | +8 |
| MXAN\_1690 | putative esterase | +20 | +34 | +10 | +6 |
| MXAN\_2251 | glycine betaine-L-proline ABC transporter, periplasmic substrate-binding protein | +7 | +43 | +4 | +3 |
| MXAN\_3915 | TonB family protein | +1 | +24 | +1 | +1 |
| **myxochelin operon** |
| MXAN\_3639 | iron-chelator utilization protein (MxcB)  | +8 | +34 | +20 | +8 |
| MXAN\_3640 | siderophore biosynthesis aminotransferase MxcL (AAT\_I superfamily, HemL) | +23 | +15 | +18 | +13 |
| MXAN\_3641 | major facilitator family transporter (efflux pump MxcK) (MFS) | +44 | +32 | +24 | +12 |
| MXAN\_3642 | 3-deoxy-7-phosphoheptulonate synthase (AroAA5 *Stigmatella aurantiaca* a15) | +55 | +39 | +37 | +16 |
| MXAN\_3643 | non-ribosomal peptide synthase (MxcG) | +32 | +24 | +29 | +10 |
| MXAN\_3644 | isochorismatase (MxcF)  | +36 | +46 | +48 | +17 |
| MXAN\_3645 | 2,3-dihydroxybenzoate-AMP ligase (MxcE) | +16 | +39 | +41 | +15 |
| MXAN\_3646 | isochorismate synthase (MxcD) | +10 | +31 | +46 | +13 |
| MXAN\_3647 | 2,3-dihydro-2,3-dihydroxybenzoate dehydrogenase (MxcC) | +5 | +39 | +48 | +9 |
| **macrolide efflux** |
| MXAN\_4198 | putative outer membrane macrolide efflux protein | +75 | +26 | +374 | +86 |
| MXAN\_4199 | putative macrolide efflux ABC transporter, ATP-binding protein | +115 | +35 | +412 | +137 |
| MXAN\_4200 | putative macrolide-specific efflux protein MacA | +119 | +22 | +313 | +93 |
| MXAN\_4201 | putative macrolide efflux ABC transporter, permease protein | +88 | +15 | +216 | +60 |
| **iron transporters** |
| MXAN\_6000 | Fe-ABC periplasmic iron compound-binding protein transporter | +10 | +17 | +10 | +7 |
| MXAN\_6911 | FepA-like TonB-dependent receptor | +61 | +278 | +39 | +6 |
| **hypothetical, conserved hypothetical** |
| MXAN\_2248 | conserved hypothetical protein | +8 | +40 | +1 | +1 |
| MXAN\_5022 | conserved hypothetical protein | +6 | +9 | +4 | +7 |
| MXAN\_5093 | conserved hypothetical protein | +11 | -1 | +3 | +9 |
| MXAN\_6640 | hypothetical protein | +12 | +44 | +14 | +3 |
| MXAN\_6641 | hypothetical protein | +25 | +103 | +41 | +7 |
| **lipoproteins** |
| MXAN\_6263 | conserved hypothetical protein | +12 | +87 | +23 | +5 |
| MXAN\_6613 | putative lipoprotein | -2 | -2 | +29 | +2 |
| **miscellaneous** |
| MXAN\_0401 | hypothetical protein | +2 | +23 | +2 | +5 |
| MXAN\_0506 | monooxygenase, flavin-containing | +9 | +429 | +12 | +4 |
| MXAN\_0934 | protease DO family protein | +6 | +13 | +17 | +5 |
| MXAN\_1200 | site-specific recombinase, phage integrase family | +4 | +26 | +4 | +2 |
| MXAN\_3702 | transcriptional regulator, Fur family | +2 | +3 | +2 | +2 |
| MXAN\_4389 | catalase KatB (*katB*) | +30 | +30 | +17 | +14 |
| MXAN\_6714 | methionine aminopeptidase, type I (*map*) | +27 | +4 | +6 | +4 |
| MXAN\_6805 | ribosomal protein S4 (*rpsD*) | +10 | +37 | +24 | +6 |
| MXAN\_6806 | putative hydrolase | +4 | +73 | +16 | +3 |
| MXAN\_6967 | transcriptional regulator, Fur family | +4 | +3 | +3 | +2 |
| **B. Genes whose expression is typically decreased in tan strains relative to WT-Y** |
| **ID** | **Description** | **WT-T** | ***asgB*** | ***dkx*** | ***228*** |
| **DKxanthene biosynthesis** |  |  |
| MXAN\_4289 | hypothetical protein | -136 | -227 | -2 | -147 |
| MXAN\_4290 | putative thioesterase | -316 | -276 | -1 | -254 |
| MXAN\_4291 | conserved hypothetical protein | -185 | -289 | -1 | -177 |
| MXAN\_4292 | polyketide synthase | -62 | -140 | -4 | -111 |
| MXAN\_4293 | hypothetical protein | -32 | -584 | -3 | -169 |
| MXAN\_4296 | non-ribosomal peptide synthetase | -56 | -414 | -4 | -295 |
| MXAN\_4297 | polyketide synthase | -47 | -302 | -2 | -190 |
| MXAN\_4298 | polyketide synthase type I | -45 | -69 | -34 | -64 |
| MXAN\_4299 | non-ribosomal peptide synthase-polyketide synthase | -63 | -121 | -41 | -100 |
| MXAN\_4301 | polyketide synthase type I | -48 | -77 | -37 | -75 |
| MXAN\_4302 | FAD-binding domain protein | -55 | -114 | -59 | -112 |
| MXAN\_4303 | type I phosphodiesterase-nucleotide pyrophosphatase family protein | -42 | -73 | -1 | -86 |
| MXAN\_4304 | acyl-CoA dehydrogenase | -19 | -21 | -1 | -28 |
| MXAN\_4305 | amino acid adenyltransferase | -35 | -41 | -1 | -45 |
| **myxovirescin (antibiotic TA) synthesis** |  |  |
| MXAN\_3930 | Signal peptidase II (*lspA*) | -6 | -6 | -2 | -5 |
| MXAN\_3931 | conserved domain protein | -74 | -103 | -4 | -36 |
| MXAN\_3932 | polyketide synthase | -15 | -18 | -3 | -15 |
| MXAN\_3933 | mixed type I polyketide synthase - peptide synthetase | -17 | -20 | -4 | -176 |
| MXAN\_3934 | PfaD family protein | -30 | -49 | -4 | -34 |
| MXAN\_3935 | non-ribosomal peptide synthase-polyketide synthase Ta1 | -12 | -14 | -4 | -13 |
| MXAN\_3936 | polyketide synthase | -7 | -8 | -3 | -8 |
| MXAN\_3937 | luciferase-like monooxygenase family protein | -16 | -20 | -4 | -19 |
| MXAN\_3938 | polyketide synthase | -6 | -7 | -2 | -7 |
| MXAN\_3939 | enoyl-CoA hydratase-isomerase family protein | -17 | -21 | -3 | -19 |
| MXAN\_3940 | enoyl-CoA hydratase-isomerase family protein | -5 | -6 | -2 | -5 |
| MXAN\_3941 | polyketide synthase | -12 | -12 | -3 | -18 |
| MXAN\_3942 | acyltranferase-malonyl CoA-acyl carrier protein transacylase (*fabD*) | -20 | -25 | -2 | -22 |
| MXAN\_3943 | cytochrome P450 family protein | -77 | -79 | -2 | -44 |
| MXAN\_3944 | signal peptidase II (*lspA*) | -13 | -12 | -1 | -6 |
| MXAN\_3945 | polyketide TA biosynthesis protein TaF (*taF*) | -35 | -39 | -3 | -34 |
| MXAN\_3946 | putative acyl carrier protein | -164 | -195 | -2 | -146 |
| MXAN\_3947 | conserved hypothetical protein | -28 | -27 | -2 | -27 |
| MXAN\_3948 | polyketide TA biosynthesis protein TaC (*taC*) | -111 | -112 | -3 | -96 |
| MXAN\_3949 | acyl carrier protein | -236 | -172 | -2 | -112 |
| MXAN\_3950 | NusG-like protein (*taA*) | -208 | -79 | -2 | -95 |
| **transporters, receptors** |  |  |
| MXAN\_4746 | TonB-dependent receptor | -19 | -18 | -2 | -1 |
| MXAN\_4747 | putative lipoprotein | -7 | -16 | -2 | -1 |
| MXAN\_7147 | efflux transporter, RND family, MFP subunit | -6 | -2 | -6 | -7 |
| **putative operon** |  |  |
| MXAN\_6223 | sensor histidine kinase | -3 | -3 | -3 | -4 |
| MXAN\_6225 | putative lipoprotein | -4 | -25 | -27 | -18 |
| MXAN\_6226 | hypothetical protein | -6 | -27 | -47 | -24 |
| MXAN\_6227 | putative lipoprotein | -3 | -3 | -3 | -4 |
| **hypothetical, conserved hypothetical genes** |  |  |
| MXAN\_0138 | conserved hypothetical protein | -5 | -8 | -7 | -4 |
| MXAN\_1019 | hypothetical protein | -5 | -8 | -7 | -4 |
| MXAN\_1592 | hypothetical protein | -15 | -12 | -7 | -2 |
| MXAN\_1697 | conserved hypothetical protein | -52 | -131 | -3 | -65 |
| MXAN\_2412 | hypothetical protein | -9 | -5 | -11 | -11 |
| MXAN\_3433 | conserved hypothetical protein | -19 | -35 | -2 | -24 |
| MXAN\_4492 | conserved hypothetical protein | -9 | -11 | -2 | -13 |
| MXAN\_5434 | hypothetical protein | -7 | -13 | -3 | -5 |
| MXAN\_6272 | conserved hypothetical protein | -3 | -2 | -6 | -3 |
| MXAN\_7409 | conserved hypothetical protein | -3 | -6 | -6 | -9 |
| **lipoproteins, putative lipoproteins** |  |  |
| MXAN\_0538 | putative lipoprotein | -20 | -31 | -22 | -7 |
| MXAN\_6563 | putative lipoprotein | -4 | -7 | -3 | -4 |
| **miscellaneous**  |  |  |
| MXAN\_0996 | tryptophan halogenase | -7 | -9 | -3 | -8 |
| MXAN\_2791 | protease B (*prtB*) | -6 | -62 | -8 | -4 |
| MXAN\_6205 | microbial collagenase | -17 | -34 | -10 | -7 |

Supplemental array table legend: Genes showing significant expression changes in at least one of the *M. xanthus* tan strains (12 datasets: four biological replicates with triplicate technical replicates) in DNA tiling array studies relative to the WT-Y variant. Column headings: fold increase represents the change in expression and is derived from coefficient value; ID = MXAN # and description refers to annotation; both are derived from the *M. xanthus* genome data at NCBI <http://www.ncbi.nlm.nih.gov/genome/1120>.