**Table S6.** Genes down-regulated in mid log phase by Ax21

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| --- | --- | --- | --- |
|  |  |  | **Fold down-regulated** |
| **Locus ID** | **Common name** | **COG ID** | **Early log** | **Mid log** | **Late log** |
| PXO\_00015 | GTP-binding protein Obg/CgtA | COG0536R |  | 2.42 |  |
| PXO\_00080 | conserved hypothetical protein |  |  | 1.88 |  |
| PXO\_00142 | isopentenyl transferase | COG0324J |  | 1.78 |  |
| PXO\_00166 | Smr domain protein | COG2840S |  | 3.93 |  |
| PXO\_00175 | conserved hypothetical protein |  |  | 2.25 | 1.77 |
| PXO\_00339 | MFS transporter | COG2807P |  | 3.71 |  |
| PXO\_00528 | L-lysine 6-aminotransferase | COG4992E |  | 1.78 |  |
| PXO\_00610 | 6-phosphogluconolactonase | COG0363G |  | 2.09 | 1.96 |
| PXO\_00722 | poly(hydroxyalcanoate) granule associated protein |  |  | 2.45 |  |
| PXO\_00747 | HesB protein family | COG0316S |  | 2.26 |  |
| PXO\_00787 | conserved hypothetical protein |  |  | 2.51 |  |
| PXO\_00870 | conserved hypothetical protein |  |  | 2.62 |  |
| PXO\_00893 | conserved hypothetical protein |  |  | 2.25 | 1.81 |
| PXO\_00911 | inner membrane protein (YeiH) | COG2855S |  | 3.19 |  |
| PXO\_00923 | GTP-binding protein | COG1806S |  | 2.36 |  |
| PXO\_00955 | chemotaxis phosphatase (CheZ) | COG3143NT |  | 2.18 |  |
| PXO\_01128 | ribosome recycling factor | COG0233J |  | 2.06 |  |
| PXO\_01268 | N-(5'phosphoribosyl) anthranilate isomerase | COG0135E |  | 2.02 |  |
| PXO\_01387 | phenylalanyl-tRNA synthetase, alpha subunit | COG0016J |  | 1.90 |  |
| PXO\_01488 | conserved hypothetical protein | COG2204T |  | 1.95 |  |
| PXO\_01519 | conserved hypothetical protein |  |  | 1.93 |  |
| PXO\_01523 | transcriptional coactivator/pterin dehydratase | COG2154H |  | 2.16 |  |
| PXO\_01560 | thioesterase family protein | COG0824R |  | 1.86 |  |
| PXO\_01561 | TolQ | COG0811U |  | 2.30 |  |
| PXO\_01573 | response regulator | COG2204T |  | 3.70 |  |
| PXO\_01595 | penicillin-binding protein 1B | COG0744M |  | 2.02 |  |
| PXO\_01649 | 3'(2'),5'-bisphosphate nucleotidase | COG1218P |  | 1.78 |  |
| PXO\_01711 | RNA polymerase sigma factor (RpoE) | COG1595K |  | 3.14 |  |
| PXO\_01713 | periplasmic protease | COG0265O |  | 2.70 |  |
| PXO\_01742 | conserved hypothetical protein |  |  | 2.62 |  |
| PXO\_01766 | conserved hypothetical protein |  |  | 1.93 |  |
| PXO\_01791 | conserved hypothetical protein | COG4731S |  | 2.05 |  |
| PXO\_01875 | lipoprotein (RplB) | COG2980M |  | 1.98 |  |
| PXO\_01936 | cation:proton antiporter | COG4651P |  | 1.85 |  |
| PXO\_01938 | TonB-dependent outer membrane receptor | COG4771P |  | 1.98 |  |
| PXO\_01980 | Rrf2 family protein | COG1959K | 3.10 | 4.44 |  |
| PXO\_02005 | rickettsia 17 kDa surface antigen family |  |  | 1.99 |  |
| PXO\_02215 | cytochrome D ubiquinol oxidase, subunit II | COG1294C |  | 1.91 |  |
| PXO\_02318 | molybdate ABC transporter, periplasmic molybdate-binding protein | COG0725P |  | 1.75 |  |
| PXO\_02348 | methanol dehydrogenase regulatory protein | COG0714R |  | 2.80 |  |
| PXO\_02439 | outer membrane protein (Slp) | COG3065M |  | 2.66 |  |
| PXO\_02440 | HIT domain, putative | COG0537FGR |  | 1.99 |  |
| PXO\_02518 | ABC transporter sulfate binding protein | COG1613P |  | 1.80 |  |
| PXO\_02539 | cell wall hydrolase superfamily | COG3773M |  | 2.47 |  |
| PXO\_02601 | transcriptional regulator | COG4977K |  | 2.80 |  |
| PXO\_02613 | 3-isopropylmalate dehydratase, large subunit | COG0065E |  | 1.92 | 1.86 |
| PXO\_02619 | transcriptional regulator | COG1309K | 1.77 | 2.33 |  |
| PXO\_02671 | xanthomonas adhesin-like protein A (XadA) |  |  | 2.48 |  |
| PXO\_02747 | shikimate kinase | COG3265G |  | 2.29 |  |
| PXO\_02811 | lipoprotein, putative |  |  | 3.30 |  |
| PXO\_02813 | conserved hypothetical protein |  |  | 2.03 |  |
| PXO\_02819 | iron-uptake factor | COG0369P |  | 2.30 | 2.05 |
| PXO\_02835 | conserved hypothetical protein | COG4775M |  | 2.21 |  |
| PXO\_02846 | thymidylate kinase (Tmk) | COG0125F |  | 1.88 |  |
| PXO\_02847 | conserved hypothetical protein |  |  | 1.74 |  |
| PXO\_02861 | hydrolase, alpha/beta fold family protein | COG1506E |  | 2.21 |  |
| PXO\_02934 | exodeoxyribonuclease III (Xth) | COG0708L |  | 1.95 |  |
| PXO\_03081 | conserved hypothetical protein |  |  | 2.83 |  |
| PXO\_03085 | 3-oxoacyl-(acyl-carrier protein) reductase | COG1028IQR |  | 3.73 |  |
| PXO\_03144 | conserved hypothetical protein |  | 1.92 | 2.74 |  |
| PXO\_03147 | ATP-dependent RNA helicase | COG0513LKJ |  | 2.05 |  |
| PXO\_03151 | outer membran protein (UptD) |  |  | 1.81 |  |
| PXO\_03210 | toluene tolerance protein | COG0767Q |  | 2.10 |  |
| PXO\_03212 | conserved hypothetical protein |  |  | 3.71 |  |
| PXO\_03227 | amino acid transporter | COG0531E |  | 2.48 |  |
| PXO\_03241 | conserved hypothetical protein |  |  | 2.02 |  |
| PXO\_03247 | transglycosylase associated protein |  |  | 2.24 |  |
| PXO\_03271 | conserved hypothetical protein |  |  | 2.82 |  |
| PXO\_03273 | conserved hypothetical protein | COG4798R |  | 2.09 |  |
| PXO\_03298 | endoglucanase | COG2730G |  | 2.16 |  |
| PXO\_03325 | saccharopine dehydrogenase | COG1748E |  | 2.05 |  |
| PXO\_03374 | malto-oligosyltrehalose trehalohydrolase (TreZ) | COG0296G |  | 2.11 |  |
| PXO\_03378 | putative signal protein with GGDEF domain | COG3706T |  | 1.95 |  |
| PXO\_03385 | conserved hypothetical protein |  |  | 2.34 |  |
| PXO\_03396 | type III secretion apparatus H+-transporting two-sector ATPase | COG1157NU |  | 2.38 |  |
| PXO\_03433 | ISXoo15 transposase | COG2826L |  | 2.05 |  |
| PXO\_03440 | AtsE | COG5622N |  | 1.92 |  |
| PXO\_03478 | peptidase M48, Ste24p | COG4783R |  | 2.54 |  |
| PXO\_03486 | ribonuclease P protein component | COG0594J |  | 2.31 |  |
| PXO\_03580 | partition protein (ParA) | COG1192D |  | 1.80 |  |
| PXO\_03648 | arginine decarboxylase (SpeA) | COG1166E |  | 1.77 |  |
| PXO\_03745 | conserved hypothetical protein |  |  | 2.88 |  |
| PXO\_03749 | oxidoreductase | COG0702MG |  | 1.81 |  |
| PXO\_03835 | conserved hypothetical protein |  |  | 2.36 |  |
| PXO\_03840 | conserved hypothetical protein | COG1826U |  | 1.82 |  |
| PXO\_03878 | DesA3\_2 | COG3239I |  | 2.53 | 1.85 |
| PXO\_03899 | lipoprotein, putative |  |  | 2.05 |  |
| PXO\_03903 | addiction module antidote protein, HigA family | COG3093R |  | 2.38 |  |
| PXO\_03904 | plasmid maintenance system killer protein | COG3549R |  | 3.83 |  |
| PXO\_03948 | conserved hypothetical protein |  |  | 4.38 |  |
| PXO\_04000 | anthranilate synthase component II | COG0512EH |  | 1.86 |  |
| PXO\_04124 | diaminopimelate epimerase | COG0253E |  | 2.58 |  |
| PXO\_04136 | conserved hypothetical protein | COG3137M |  | 1.77 |  |
| PXO\_04229 | conserved hypothetical protein |  |  | 1.76 |  |
| PXO\_04241 | EF hand domain protein |  |  | 4.99 |  |
| PXO\_04289 | lipoic acid synthetase | COG0320H |  | 1.76 |  |
| PXO\_04300 | conserved hypothetical protein |  |  | 1.76 |  |
| PXO\_04304 | two-component system sensor protein | COG4251T |  | 1.97 |  |
| PXO\_04307 | 2-amino-4-hydroxy-6-hydroxymethyldihydropteridine pyrophosphokinase | COG0801H |  | 1.78 |  |
| PXO\_04429 | conserved mebrane associated protein | COG1814S |  | 1.98 |  |
| PXO\_04504 | ribosomal protein L18 | COG0256J |  | 2.75 |  |
| PXO\_04631 | protocatechuate 3,4-dioxygenase beta chain | COG3384S |  | 3.53 | 1.79 |
| PXO\_04645 | dimethyladenosine transferase (KsgA) | COG0030J |  | 1.92 |  |
| PXO\_04653 | LemA | COG1704S |  | 3.04 |  |
| PXO\_04659 | two-component system regulatory protein | COG0745TK |  | 2.05 | 1.91 |
| PXO\_04806 | outer membrane protein | COG3134S |  | 3.72 |  |
| PXO\_04861 | conserved hypothetical protein |  | 2.23 | 2.29 |  |
| PXO\_04868 | glycosyl hydrolase, family 15 | COG3387G |  | 1.80 |  |
| PXO\_06079 | sugar aldolase | COG0235G |  | 1.92 |  |
| PXO\_06086 | conserved hypothetical protein |  |  | 2.13 |  |
| PXO\_06111 | conserved hypothetical protein | COG1426S |  | 2.68 |  |
| PXO\_06215 | transposase | COG2826L |  | 2.48 |  |