**Additional files**



**Additional Figure 1. The different expressed genes between the biofilm bacteria and planktonic bacterial of PAO1.** PAO1 were cultured as biofilm (static) and planktonic (shake, 180rpm) cells for 12 and 24 hours respectively, the bacterial was collected and the genes transcription was measured by qPCR.

**Additional Table 1. Primers** **for qPCR and PA2146 complementation**

|  |  |  |
| --- | --- | --- |
| Primers | Oligonucleotide (5’→3’) | Reference |
| Primers for qPCR |  |  |
| 16S rRNA-F | GCGCAACCCTTGTCCTTAGTT | Zhao et al[1] |
| 16S rRNA-R | TGTCACCGGCAGTCTCCTTAG |
| pqsA-F | GACCGGCTGTATTCGATTC | Yin et al[2] |
| pqsA-R | GCTGAACCAGGGAAAGAAC |
| pqsB-F | ACGTCAAGGGACACCTCAAC | Cummins et al[3] |
| pqsB-R | GATCAGCAGCAGTTCATCCA |
| pqsC-F | CGAGTCCTGGTGGCAATTCT | Knoten et al[4] |
| pqsC-R | TCAGCATGTCCACGCTATCC |
| pqsD-F | GTGGATCGTCTGGGCAACAT | Knoten et al[4] |
| pqsD-R | CTCCTCAGGTTTGCGGTACA |
| pqsE-F | TGATGACCTGTGCCTGTTGG | Knoten et al[4] |
| pqsE-R | GTCGTAGTGCTTGTGGGTGA |
| pqsH-F | GCGCGGATCGAGTTCATC | Viducic et al[5] |
| pqsH-R | CAGGGCGATTCCCACTGA |
| phnA-F | ACGTGGACAGCAAGGCTGCG | Knoten et al[4] |
| phnA-R | GGGCCGGACAGTCCTCGCTC |
| lasR-F | ACGCTCAAGTGGAAAATTGG | El-Mowafy et al[6] |
| lasR-R | GTAGATGGACGGTTCCCAGA |
| rhlR-F | AGGAATGACGGAGGCTTTTT | El-Mowafy et al[6] |
| rhlR-R | CCCGTAGTTCTGCATCTGGT |
| rhlI-F | CTCTCTGAATCGCTGGAAGG | El-Mowafy et al[6] |
| rhlI-R | GACGTCCTTGAGCAGGTAGG |
| rhlA-F | GATCGAGCTGGACGACAAGTC | Pattnaik et al[7] |
| rhlA-R | GCTGATGGTTGCTGGCTTTC |
| PA3600-F | ATGAAAGTCCTCGCCTCGCT | This study |
| PA3600-R | GGATTCGACTTGCAGATCACGT |
| PA3530-F | CTGCCTCTGCCAAGGTGTTAC | This study |
| PA3530-R | GCACTTGCCGCACTGGGTAC |
| PA3432-F | GCTGATGAGCCTGCTCGACTACGG | This study |
| PA3432-R | CGGCACATCCACTCCACCGACA |
| PA4471-F | TTCGAGAAAGCCTACAACCTCCTG | This study |
| PA4471-R | CTGCCGTTGGTGGTCAGTCG |
| PA2385-F | GCGGGTTGCTGGCTTTCTCC | This study |
| PA2385-R | TCGGCGTCGATCTGCCTGTC |
| PA2146-F | ATGGCACAGCATCAAGGTGG | This study |
| PA2146-R | CGCTGCGGATCGTTCTTGA |
| PA2570-F | TATCTACAATCCGGGCGATG | This study |
| PA2570-R | GACCAGCGCACCACAAAA |
| Primers for PA2146 complementation |
| pRK415-F | caacgcaattaatgtgagttagctcac | This study |
| pRK415-R | ctcttcgctattacgccagctg |
| PA2146-up | atatctagaTAATCTGAACCACTGGCGAAACACC XbaI | This study |
| PA2146-down | atagaattCACTTCACTGCGCGGTTATCAGTTC EcoRI |

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