**Table S1.** Genes involved in bacterial copper homeostasis and/or resistance and primers used for their amplification.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Target gene** | **Function** |  | **5’3’ sequence** | **Hybridization (°C)** | **Amplicon size (bp)** | **Reference** |
| *tcrB* | ATPase pump | FWD | CATCACGGTAGCTTTAAGGAGATTTTC | 55 | 663 | Mourao *et al*., 2015  Brown *et al,* 1995 |
| REV | ATAGAGGACTCCGCCACCATTG |
| *pcoD*  *(pcoABCDRS*) | Inner membrane pump | FWD | CTGGCCACACTTGCCTGGGG | 55 | 500 | Mourao *et al*., 2015  Brown *et al,* 1995 |
| REV | CACGCTACGGCGCCCAGAAT |
| 16S rDNA | Ribosomal RNA subunit | FWD | ACTCCTACGGGAGGCAG | 55 | 196 | Ovreas *et al.,* 1997 |
| REV | ATTACCGCGGCTGCTGGCA |
| *copA*  *(copABCDRS*) | ATPase pump | FWD | ATGTGGAACSARATGCGKATGA | 61 | 193 | Roosa *et al.,* 2014 |
| REV | AGYTTCAGGCCSGGAATACG |
| *cusA*  *(cusCFBA*) | RND pump | FWD | ATGCSACVGGYGTTGGCTGG | 61 | 410 | Besaury *et al.,*2013 |
| REV | CCRTTCAGYTCGGCRATRCC |
| *czcA*  *(czcAB*) | Zn 2+ pump | FWD | TCGACGGBGCCGTGGTSMTBGTCGAGAA | 61 | 232 | Roosa *et al.,* 2014 |
| REV | GTVAWSGCCAKCGGVBGGAACA |
| *cueO* | Multicopper oxidase | FWD | CCCTAGGCGGTGTTTTCATA | 48 | 996 | Silviera *et al.,* 2011  Laverde *et al,* 2011 |
| REV | TCATTGTCAAGGCAACCAA |
| *pcoE* | Chaperone | FWD | ATGAATATATTAATCACGAC | 48°C | 450 | Zimmermann *et al.*, 2012 |
| REV | TTACCTGGTCGAATACAGCC |
| *copZ*  *(copYZAB*) | Chaperone | FWD | AAAATTGATGGGATGAAATG | 48°C | 179 | Reyes-Jara *et al.,* 2010 |
| REV | AACCTTGAATTTTGTATCTGC |

**Table S2.** Colony forming units recovered on untreated and disinfectant-treated metallic surfaces (QA: quaternary ammonnium treatment; PA/HP: peracetic acid/hydrogen peroxide treatment; QA & PA/HP = quaternary ammonium combined with peracetic acid/hydrogen peroxide treatment).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Bacterial strain** |  | **Stainless steel** | | | |  | **Copper** | | | |  | **AB+® brass** | | | |
|  | **Untreated** | **QA** | **PA/HP** | **QA & PA/HP** |  | **Untreated** | **QA** | **PA/HP** | **QA & PA/HP** |  | **Untreated** | **QA** | **PA/HP** | **QA & PA/HP** |
| **ABAM41\*,\*\***  Median  Minimum  Maximum |  | 240000  20000  432000 | 582000  156000  1360000 | 520000  80000  1080000 | 624000  128000  1032000 |  | 80  0  28400 | 1  0  400 | 0  0  4 | 0  0  21 |  | 5  0  800 | 2200  50  30000 | 4600  80  22800 | 1  0  3600 |
| **AM85\*,\*\***  Median  Minimum  Maximum |  | 25800  0  180000 | 98000  36000  252000 | ND1 | 16200  80  58800 |  | 0  0  3 | 2  0  17 | ND | 0  0  0 |  | 0  0  0 | 78  0  2400 | ND | 0  0  23 |
| **ECLOAM1\*,\*\***  Median  Minimum  Maximum |  | 71000  4000  216000 | 520000  200000  1040000 | ND | 820000  208000  4400000 |  | 44  2  800 | 46  3  2400 | ND | 0  0  1 |  | 0  0  2000 | 1200  4  8000 | ND | 1  0  47 |
| **KPNAM2\*,\*\***  Median  Minimum  Maximum |  | 3800  80  28400 | 266000  92000  1000000 | ND | 186000  56000  532000 |  | 8  0  400 | 400  13  7600 | ND | 0  0  132000 |  | 3  0  800 | 1200  80  12400 | ND | 0  0  2800 |
| **EFUMAM2\***  Median  Minimum  Maximum |  | 400  0  10000 | 142000  53600  272000 | ND | 188000  28800  348000 |  | 46  0  8800 | 208  0  4400 | ND | 1  0  26000 |  | 0  0  800 | 800  1  19600 | ND | 3  0  9600 |
| **SAAM33\*,\*\***  Median  Minimum  Maximum |  | 76000  11600  1560000 | 224000  30000  876000 | 860000  2000  1920000 | 520000  52000  1480000 |  | 0  0  800 | 0  0  1 | 30  2  2800 | 4  0  10400 |  | 46  0  1200 | 0  0  15 | 5800  800  31600 | 80  0  2800 |

1: Not determined

Significant difference between the various conditions \*: for stainless steel and AB+® brass (p<0.001, Friedman test) and \*\*: for copper (p<0.05, Friedman test)

**Table S3.** p-values of pairwise comparisons calculated by Wilcoxon test (QA: quaternary ammonnium treatment; PA/HP: peracetic acid/hydrogen peroxide treatment; QA & PA/HP = quaternary ammonium combined with peracetic acid/hydrogen peroxide treatment).

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | **Stainless steel** | | |  | **Copper** | | |  | **AB+® brass** | | |
|  | **QA** | **PA/HP** | **QA & PA/HP** |  | **QA** | **PA/HP** | **QA & PA/HP** |  | **QA** | **PA/HP** | **QA & PA/HP** |
| **ABAM41** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Untreated** |  | **0.0003\*** | **0.0022** | **0.0003** |  | 0.0536 | **0.0024** | **0.0045** |  | **<0.0001** | **<0.0001** | 0.8966 |
| QA |  |  | 0.2713 | 0.6892 |  |  | **0.0128** | **0.0366** |  |  | **0.0434** | **<0.0001** |
| **PA/HP** |  |  |  | 0.5287 |  |  |  | >0.05 |  |  |  | **<0.0001** |
| **AM85** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Untreated** |  | **0.008** | ND1 | 0.234 |  | **0.0024** | ND | >0.05 |  | **<0.0001** | ND | 0.05 |
| QA |  |  | ND | **0.0003** |  |  | ND | **0.0024** |  |  | ND | **<0.0001** |
| **PA/HP** |  |  |  | ND |  |  |  | ND |  |  |  | ND |
| **ECLOAM1** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Untreated** |  | **0.0002** | ND | **0.0002** |  | 0.2543 | ND | **0.0002** |  | **<0.0001** | ND | **0.0155** |
| QA |  |  | ND | **0.0193** |  |  | ND | **0.0002** |  |  | ND | **<0.0001** |
| **PA/HP** |  |  |  | ND |  |  |  | ND |  |  |  | ND |
| **KPNAM2** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Untreated** |  | **0.0002** | ND | **0.0002** |  | **0.0034** | ND | 0.1118 |  | **<0.0001** | ND | 0.5552 |
| QA |  |  | ND | 0.5619 |  |  | ND | **0.0285** |  |  | ND | **0.0008** |
| **PA/HP** |  |  |  | ND |  |  |  | ND |  |  |  | ND |
| **EFUMAM2** |  |  |  |  |  |  |  |  |  |  |  |  |
| **Untreated** |  | **0.0002** | ND | **0.0002** |  | NS2 | | |  | **0.002** | ND | 0.0561 |
| QA |  |  | ND | 0.1615 |  |  |  | ND | **0.0025** |
| **PA/HP** |  |  |  | ND |  |  |  |  | ND |
| **SAAM33** |  |  |  |  |  |  |  |  |  |
| **Untreated** |  | **0.0226** | **0.0111** | **0.0036** |  | 0.05 | **0.0324** | 0.6312 |  | **<0.0001** | **<0.0001** | 0.0601 |
| QA |  |  | **0.0117** | **0.0088** |  |  | **<0.0001** | **0.003** |  |  | **<0.0001** | **<0.0001** |
| **PA/HP** |  |  |  | 0.1236 |  |  |  | 0.7188 |  |  |  | **<0.0001** |

\*: Values in bold reflect a statistically significant difference between the two compared conditions

1: Not determined; 2: Not significant (p>0.05, Friedman test)