

Supplementary Table 1. Strains and Plasmids

| Strain/Plasmid | Relevant properties | Reference |
|----------------|--|------------|
| Strain | | |
| DH5alpha | <i>E. coli</i> Φ 80 <i>lacZ</i> Δ M15 (<i>argF-lac</i>) U169 <i>recA</i> <i>l</i> <i>endA</i> <i>1</i> <i>hsdR</i> <i>17</i> (<i>r</i> ⁺ <i>m</i> ⁺) <i>supE</i> <i>44</i> ⁺ <i>thi-1</i> <i>gyrA</i> <i>96</i> <i>relA</i> <i>1</i> <i>phoA</i> | Invitrogen |
| DL739 | <i>E. coli</i> MC4100 <i>dam-13::Tn9</i> | [20] |
| H99 | <i>Hfx. volcanii</i> DS70 Δ <i>pyrE2</i> Δ <i>hdrB</i> Δ <i>trpA</i> | [21] |
| KD5 | H99 Δ <i>tatAo::trpA</i> ⁺ | [22] |
| KD23 | H99 containing pKD13 | [12] |
| KD26 | H99 containing pKD17 | [12] |
| KD27 | H99 containing pKD18 | [12] |
| KD32 | H99 containing pKD23 | [12] |
| KD35 | H99 containing pKD26 | [12] |
| KD37 | H99 containing pKD28 | [12] |
| ST91 | H99 containing pST10 | this study |
| ST96 | H99 containing pST11 | this study |
| ST101 | H99 containing pST12 | this study |
| ST106 | KD5 containing pST10 | this study |
| ST107 | H99 containing pST6 | this study |
| ST111 | H99 containing pST7 | this study |
| ST114 | H99 containing pST8 | this study |
| ST118 | KD5 containing pST6 | this study |
| ST126 | H99 containing pST17 | this study |
| ST128 | H99 containing pST18 | this study |
| ST135 | H99 containing pST14 | this study |
| ST137 | H99 containing pST15 | this study |
| ST139 | H99 containing pST16 | this study |
| ST167 | H99 containing pST19 | this study |
| ST168 | KD5 containing pST11 | this study |
| ST171 | KD5 containing pST7 | this study |
| ST176 | KD5 containing pKD28 | this study |
| ST177 | KD5 containing pKD26 | this study |
| ST178 | KD5 containing pKD13 | this study |
| ST179 | KD5 containing pKD17 | this study |
| ST180 | KD5 containing pKD23 | this study |
| SI44 | H99 containing pSI44 | this study |
| SI45 | H99 containing pSI45 | this study |
| Plasmid | | |
| pMLH3 | (<i>Amp</i> ^r , <i>Nb</i> ^r , <i>Mev</i> ^r) <i>H. volcanii</i> - <i>E. coli</i> shuttle vector | [18] |
| pST6 | P _{fdx} <i>Hvo1242-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST7 | P _{fdx} <i>Hvo1242C26S-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST8 | P _{fdx} <i>Hvo1242KK-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST10 | P _{fdx} <i>HvoB0139-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST11 | P _{fdx} <i>HvoB0139C21S-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST12 | P _{fdx} <i>HvoB0139KK-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST14 | P _{fdx} <i>Hvo1808-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST15 | P _{fdx} <i>Hvo1808C19S-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST16 | P _{fdx} Δ <i>ssHvo1808-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST17 | P _{fdx} <i>Hvo1580-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST18 | P _{fdx} <i>Hvo1580C19S-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pST19 | P _{fdx} Δ <i>ssHvo1580-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | this study |
| pKD13 | P _{fdx} - <i>exo-arabinanase-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | [12] |
| pKD17 | P _{fdx} - <i>DsbA-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | [12] |
| pKD18 | P _{fdx} - <i>DsbAKK-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | [12] |
| pKD23 | P _{fdx} - <i>Ibp-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | [12] |
| pKD26 | P _{fdx} - <i>IbpCxS-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | [12] |
| pKD28 | P _{fdx} - <i>DsbAC22S-myc</i> cloned into pMLH3 replacing <i>Mev</i> ^r cassette | [12] |
| pRV1-ptna | (<i>Amp</i> ^r , <i>Nb</i> ^r) <i>H. volcanii</i> - <i>E. coli</i> shuttle vector | [19] |

| | | |
|-------|---|------------|
| pSI44 | <i>Hvo0494-his</i> cloned into pRV1- <i>ptna</i> via <i>NdeI/EcoRI</i> restriction sites | this study |
| pSI45 | <i>Hvo0494C20S-is</i> cloned into pRV1- <i>ptna</i> via <i>NdeI/EcoRI</i> restriction sites | this study |