## SUPPLEMENTARY DATA

## SUPPLEMENTARY FIGURES



Figure S1
Lack of PolyP in S. acidocaldarius PolyP (-) strain. Both S. acidocaldarius MW001 and PolyP (-) were induced with D -arabinose during the exponential growth phase to overexpress $p p x$ in the later. PolyP levels were measured after 4 h postinduction.


Figure S2

Growth curves comparing S. acidocaldarius MW001 and PolyP (-) strains. Cells were grown at $75^{\circ} \mathrm{C}$ and 150 rpm in Brock medium supplemented as described, with $0.2 \% \mathrm{D}$-arabinose and additionally uracil for MW001. A pre culture for PPX induction was used in order to have cells lacking PolyP from the start of the experiment.


Figure S3
Representative TEM image from S. acidocaldarius MW001-PPX. When $p p x$ is not induced, cells still show archaellum (red arrow) and pili (blue arrow) even in the plasmid presence. White bar represents 250 nm .

## SUPPLEMENTARY TABLES

## TABLE S1.

## Strains used in this work

| Strain | Genotype / Phenotype | Reference |
| :---: | :---: | :---: |
| Sa. solfataricus |  |  |
| M16 | Uracil-auxotrophic mutant derived from Sa. solfataricus P1 (DMS1616) | [18] |
| PolyP (-) | Contains plasmid J0503-r_ppxS.so over expressing Sa. solfataricus PPX in presence of D-arabinose and complemented for pyrEF. Does not accumulate PolyP. | [12] |
| S. acidocaldarius |  |  |
| MW001 | Deletion of pyrEF (91-412 bp) in S. acidocaldarius DSM639. Uracilauxotrophic mutant | [14] |
| PolyP (-) | Contains plasmid pSVA12801 over expressing S. acidocaldarius PPX in presence of D-arabinose and complemented for $p y r \mathrm{EF}$. Does not accumulate PolyP. | This study |

## TABLE S2.

## Primers used in this work

## Cloning

| Name | Sequence ( $5^{\prime}$ 3') | Description |
| :---: | :---: | :---: |
| 10904 | ATATATGCTCTTCTAGTCGATATGCGGTAATAGACACGGGTTAC | Forward primer for cloning saci_2018 into pSVAaraFXH6 with SapI restriction site |
| 10905 | TATATAGCTCTTCATGCTAGCACACCAGCCACTGACGACTCTAC | Reverse primer for cloning saci_2018 into pSVA araFX-H6 with SapI restriction site |

## qPCR

| Gen | Protein | Primer Foward $\left(5^{\prime} \rightarrow 3^{\prime}\right)$ | Primer Reverse $\left(5^{\prime} \rightarrow 3^{\prime}\right)$ |
| :--- | :--- | :--- | :--- |
| $\mathbf{1 6 s}$ SSO |  | GGTAGCAAGTAGACCCTATGC | GGTATCAGCAAAAGCGACAA |
| SSO0067 | 30s Rps2p | GGTAGCAAGTAGACCCTATGC | GGTATCAGCAAAAGCGACAA |
| SSO2323 | Archaellin | TGCAGTAAACGAGATGGCTG | TGACACAGAAAGCCAAATCCAC |
|  | 16s Saci | CTTTCGAGGTAGCATCCCG | GTGAAATGTCCGGTTAAGTCC |
| Saci_1178 | Archaellin | ACTGCGTCTACTGCGTTATCTTTATC | GGAGATAAGTCTACACTAGATACACCA |
| Saci_2317 | AapE | GGGGCTCATTCATTAACCTCTT | GAAAGGAGATTACGCTAATGGA |
| Saci_0446 | AbfR1 | TCACCCTTTCCAACCCTATC | GCTAGTACCTACACCGAGAC |

