Supplementary File 1: Strains and plasmids.

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|  | **Properties** | **Reference** |
| **Strains** | | |
| *E.* *coli* DH5α | General cloning strain | (Hanahan, 1983) |
| *E. coli BL21 (DE3)* | Strain for protein expression | Thermo Fisher Scientific, Waltham, USA |
| *E. coli BL21 (DE3)* + pRIL | Strain for protein expression of genes with unusual codons/ CmR | Stratagene, La Jolla, USA |
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| **Plasmids** | | |
| pET21a | General cloning vector providing a C-terminal His6-tag | Novagen/Merck, Darmstadt, Germany |
| pETSUMO | Expression vector providing an N-terminal His6-SUMO-tag | Thermo Fisher Scientific, Waltham, USA |
| pRS375 | pET28a/Strep + GlnA1 | (Gutt et al., 2021) |
| pRS1672 | pETSUMO + GlnK1 | This work |
| pRS1728 | pEX-A258 + codon-optimized GlnA1 and sP26 | Eurofins Scientific, Ebersberg, Germany |
| pRS1841 | pRS375 + codon-optimized GlnA1 | This work |
| pRS1863 | pET21a + codon-optimized sP26 | This work |
| pRS1951 | pRS1840mut: R66AGlnA1 | This work |