**Table S4. Functional properties of reconstructed RNA regulons in B. subtilis and related Bacillales.**

| RNA element | *Bacillus subtilis sstr. 168* | *Bacillus amyloliquefaciens FZB42* | *Bacillus pumilus SAFR-032* | *Bacillus licheniformis DSM 13* | *Anoxybacillus flavithermus WK1* | *Geobacillus kaustophilus HTA426* | *Bacillus cereus ATCC 14579* | *Bacillus halodurans C-125* | *Bacillus clausii KSM-K16* | *Oceanobacillus iheyensis HTE831* | *Paenibacillus sp. JDR-2* | Functional role | Effector | Effector Evidence (PMID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cobalamin** | 4 | 0 | 1 | 1 | 35 | 34 | 1 | 16 | 1 | 0 | 14 | Cobalamin metabolism | adenosylcobalamin | 17038623 |
| **FMN** | 6 | 6 | 5 | 6 | 5 | 6 | 5 | 5 | 4 | 4 | 5 | Riboflavin biosynthesis | flavin mononucleotide | 12456892, 12464185 |
| **glmS** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | Hexosamine metabolism | glucosamine-6-phosphate | 15029187 |
| **Glycine** | 3 | 4 | 4 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | 0 | Glycine cleavage system | glycine | 15472076 |
| **L10_leader** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | Ribosome biogenesis | | |
| **L13_leader** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 2 | 0 | Ribosome biogenesis | | |
| **L19_leader** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | Ribosome biogenesis | | |
| **L20_leader** | 3 | 3 | 0 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 3 | Ribosome biogenesis | | |
| **L21_leader** | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | Ribosome biogenesis | | |
| **Lysine** | 2 | 2 | 2 | 2 | 1 | 1 | 4 | 4 | 2 | 2 | 1 | Lysine biosynthesis | lysine | 14523230 |
| **PreQ1** | 4 | 4 | 4 | 4 | 3 | 4 | 5 | 4 | 5 | 5 | 4 | Nucleoside queuosine biosynthesis | pre-queuosine$_1$ | 17384645 |
| **Purine** | 17 | 17 | 16 | 16 | 16 | 14 | 20 | 17 | 15 | 16 | 17 | Purine salvage and biosynthesis | guanine, adenine | 14718920 |
| **PyrR** | 10 | 10 | 10 | 10 | 10 | 11 | 11 | 10 | 10 | 10 | 7 | Pyrimidine biosynthesis and transport | PyrR | 12896995 |
| **SAM** | 26 | 25 | 25 | 25 | 17 | 24 | 45 | 10 | 18 | 25 | 3 | Methionine and cysteine biosynthesis | S-Adenosyl methionine | 16810258, 18205390 |
| **T-box(Ala)** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | Ala-specific metabolism | Ala-tRNA | 17384645 |
| **T-box(Asn)** | 2 | 2 | 0 | 2 | 2 | 0 | 2 | 2 | 2 | 0 | 0 | Asn-specific metabolism | Asn-tRNA | 12464185 |
| **T-box(Asp)** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | Asp-specific metabolism | Asp-tRNA | |
| **T-box(Gly)** | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 0 | 2 | 2 | Gly-specific metabolism | Gly-tRNA | |
| **T-box(Ile)** | 1 | 1 | 1 | 1 | 1 | 1 | 8 | 1 | 1 | 10 | 1 | Ile-specific metabolism | Ile-tRNA | |
| **T-box(Leu)** | 9 | 9 | 10 | 9 | 8 | 8 | 2 | 8 | 8 | 3 | 7 | Leu-specific metabolism | Leu-tRNA | |
| **T-box(Phe)** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | Phe-specific metabolism | Phe-tRNA | |
| **T-box(Pro)** | 3 | 3 | 4 | 3 | 3 | 3 | 1 | 3 | 3 | 4 | 4 | Pro-specific metabolism | Pro-tRNA | |
| **T-box(Ser)** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | Ser-specific metabolism | Ser-tRNA | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **T-box(Thr)** | 2 | 1 | 2 | 2 | 1 | 1 | 7 | 1 | 2 | 1 | 2 | Thr-specific metabolism | Thr-tRNA | |
| **T-box(Trp)** | 3 | 1 | 1 | 3 | 1 | 1 | 9 | 1 | 1 | 8 | 2 | Trp-specific metabolism | Trp-tRNA | |
| **T-box(Tyr)** | 2 | 1 | 1 | 2 | 1 | 1 | 10 | 1 | 1 | 2 | 1 | Tyr-specific metabolism | Tyr-tRNA | |
| **T-box(Val)** | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | Val-specific metabolism | Val-tRNA | |
| **TPP** | 14 | 18 | 13 | 13 | 13 | 10 | 19 | 8 | 12 | 13 | 10 | Thiamine biosynthesis | thiamine pyrophosphate | 17355861 |
| **ydaO-yuaA** | 3 | 1 | 2 | 2 | 0 | 6 | 5 | 2 | 0 | 3 | 11 | Cell wall metabolism and osmoprotecti | ATP | 23086297 |
| **ykkC-yxkD** | 3 | 3 | 2 | 3 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | Multidrug resistanse | | |
| **ykoK** | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | Magnesium uptake | magnesium | 15096624 |
| **ylbH** | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 2 | Hypothetical | | |
| **yybP-ykoY** | 2 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 2 | 0 | Hypothetical | | |

Number of target operons is indicated for each RNA regulon