**Supplementary file 1. Sequences of RNA and DNA molecules used in this study.**

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| **Type** | **Name** | **R or DNA** | **Source** | **Sequence (5´→3´)** |
| PCR primer | Fwd | DNA | com | GGACTAATACGACTCACTATTAGTCATTGCCGCAC |
| Rev | DNA | com | GTCAGCCATGTGTTG |
| Ribozyme | 24-3 | RNA | ivt | AGUCAUUGCCGCACGAAAGACAAAUCUGCCCUCAGAGCUUGAGAACAUCUUCGGAUGCAGAGGAGGCAGCCUUCGGUGGAACGAUCGUGCCACCGUUCUCAACACGUACCCGAACGAAAAAGACCUGACAAAAAGGCGUUGUUAGACACGCCCAGGUGCCAUACCCAACACAUGGCUGAC |
| Extension primer | P1 | RNA | syn | FAM-biotin-UUGCUACUACACGAC |
| P2 | R/DNA | syn | FAM-biotin-r(UUGCUACUACACGA)-dC |
| P3 | DNA | syn | FAM-biotin-TTGCTACTACACGAC |
| Authentic product | r15-d8 | R/DNA | syn | FAM-biotin-r(UUGCUACUACACGAC)-d(CGGGGGTG) |
| d23 | DNA | syn | FAM-biotin-TTGCTACTACACGACCGGGGGTG |
| Template | T1 | RNA | ivt | rev: TTGCTACTACACGACCGGGGGTGTTTGTCATTGTCTATAGTGAGTCGTATTAGCC tx: GACAAUGACAAACACCCCCGGUCGUGUAGUAGCAA |
| T2 | RNA | ivt | rev: TTGCTACTACACGACCGGGGGTGCGGGGGAGTTTTTGTCATTGTCTATAGTGAGTCGTATTAGCC tx: GACAAUGACAAAAACUCCCCCGCACCCCCGGUCGUGUAGUAGCAA |
| T3 | RNA | ivt | rev: TTGCTACTACACGACGAGTGGTGAGGCAGAGTTTTTGTCATTGTCTATAGTGAGTCGTATTAGCC tx: GACAAUGACAAAAACUCUGCCUCACCACUCGUCGUGUAGUAGCAA |
| T4 | RNA | ivt | rev: TTGCTACTACACGACGCGAGGAGTGTGTGTGTTTTTGTCATTGTCTATAGTGAGTCGTATTAGCC tx: GACAAUGACAAAAACACACACACUCCUCGCGUCGUGUAGUAGCAA |
| T5 | RNA | ivt | rev: TTGCTACTACACGACCGGGGGTGCGGGGGAGCGGGGGTGCGGGGGAGTTTTTGTCATTGTCTATAGTGAGTCGTATTAGCC tx: GACAAUGACAAAAACUCCCCCGCACCCCCGCUCCCCCGCACCCCCGGUCGUGUAGUAGCAA |
| T6 | RNA | ivt | rev: TTGCTACTACACGACGTGTGGAGTGCGTGTGTTTTTGTCATTGTCTATAGTGAGTCGTATTAGCC tx: GACAAUGACAAAAACACACGCACUCCACACGUCGUGUAGUAGCAA |
| dT4 | DNA | com | GACAATGACAAAAACACACACACTCCTCGCGTCGTGTAGTAGCAA |
| dT6 | DNA | com | GACAATGACAAAAACACACGCACTCCACACGTCGTGTAGTAGCAA |

The molecules were synthesized in-house (syn), purchased from IDT (com), or prepared by in vitro transcription (ivt). The PCR primers were used to amplify a portion of plasmid DNA encoding the 24-3 ribozyme. The T7 RNA polymerase promoter sequence is underlined. The forward primer for preparing DNAs encoding templates T1–T6 had the sequence 5´-GGCTAATACGACTCACTATA-3´. Sequences in red indicate the tag used on the ribozyme and templates to improve processivity. Sequences in blue indicate the primer binding site. FAM, 6-fluorescein label.