**Supplementary file 1. Sequences of all DNA strands used.** *Strand is 5’-labeled with Cy5, all other strands have a 5’-terminal phosphate. Solid underlines highlight hairpin loops, information domains are indicated by dashed underlines.*

|  |  |
| --- | --- |
| **Name** | **Sequence (5’ to 3’)** |
|  | GCA G CG TTAATTCCCG CGCCTAT CGGGAATGTAACGC AGTGGGTAATAATGA CGATAGCCGTTCG GGAAAAG CGAACGGT ATCG |
|  | GCA G CG TTAATTCCCG CGCCTAT CGGGAATGTAACGC AAAAGAAGAGAAAGA CGATAGCCGTTCG GGAAAAG CGAACGGT ATCG |
|  | GCA G CGAT ACCGTTCG CTTTTCC CGAACGGCTATCGC AGTGGGTAATAATGA GCG A ACTGTCG GTGCTTG CGACAGT GTCGC |
|  | GCA G CGAT ACCGTTCG CTTTTCC CGAACGGCTATCGC AAAAGAAGAGAAAGA GCG A ACTGTCG GTGCTTG CGACAGT GTCGC |
|  | GCA G GCGAC ACTGTCG CAAGCAC CGACAGT T CGCC AGTGGGTAATAATGA GCGG TTCCTTGC GGAGTAG GCAAGGAATCCGC |
|  | GCA G GCGAC ACTGTCG CAAGCAC CGACAGT T CGCC AAAAGAAGAGAAAGA GCGG TTCCTTGC GGAGTAG GCAAGGAATCCGC |
|  | GCA G GCGGATTCCTTGC CTACTCC GCAAGGAATC GCC AGTGGGTAATAATGA CGTTACATTCCCG ATAGGCG CGGGAATTAA CG |
|  | GCA G GCGGATTCCTTGC CTACTCC GCAAGGAATC GCC AAAAGAAGAGAAAGA CGTTACATTCCCG ATAGGCG CGGGAATTAA CG |
|  | GCT G CGC ATTAACGCG CTTGTCC CGCGTTAATTGCGC TCATTATTACCCACT CGCT CTCGGCTG TTTTGCC CAGCCGAGCAGCG |
|  | GCT G CGC ATTAACGCG CTTGTCC CGCGTTAATTGCGC TCTTTCTCTTCTTTT CGCT CTCGGCTG TTTTGCC CAGCCGAGCAGCG |
|  | GCT G CGTT GCATTGGC GATCAAA GCCAATGCGAACGC TCATTATTACCCACT CGCAATTAACGCG GGACAAG CGCGTTAAT GCG |
|  | GCT G CGTT GCATTGGC GATCAAA GCCAATGCGAACGC TCTTTCTCTTCTTTT CGCAATTAACGCG GGACAAG CGCGTTAAT GCG |
|  | GCT G GTTGGAGAAGGCG AACAGCA CGCCTTC CCAACC TCATTATTACCCACT CGTTCGCATTGGC TTTGATC GCCAATGCAA CG |
|  | GCT G GTTGGAGAAGGCG AACAGCA CGCCTTC CCAACC TCTTTCTCTTCTTTT CGTTCGCATTGGC TTTGATC GCCAATGCAA CG |
|  | GCT G CGCTGCTCGGCTG GGCAAAA CAGCCGAG AGCGC TCATTATTACCCACT GTTGG GAAGGCG TGCTGTT CGCCTTCTCCAAC |
|  | GCT G CGCTGCTCGGCTG GGCAAAA CAGCCGAG AGCGC TCTTTCTCTTCTTTT GTTGG GAAGGCG TGCTGTT CGCCTTCTCCAAC |