**S1 Table MALDI-MS data of oligonucleotides**

|  |  |  |
| --- | --- | --- |
| ***β-L-RNA sequence (5′-3′)*** | ***Calculated oligonucleotide mass*** | ***MALDI-MS [M-H]- m/z*** |
| GUCGAC | 1874.2 | 1873.8 |
| GACGUC | 1874.2 | 1875.7 |
| GCAUGC | 1874.2 | 1874.1 |
| GUGCAC | 1874.2 | 1874.4 |
| UAGAGAGAGAAAGUUUCGACUUUCUCUCUCUA | 10171.1 | 10164.0 |
| AGGAGGAGGAGGA | 4345.7 | 4349.1 |
| CGUGCGAAUGAACGCACG | 5793.6 | 5795.4 |
| CCCUCCCUUUUCCCUCCC | 5437.2 | 5433.4 |
| GGCGCAAGCC | 3198.0 | 3200.2 |
| AGAAAGAGAAGA | 3952.5 | 3956.4 |
| UCUUUCUCUUCU | 3608.1 | 3610.3 |
| ***β-D-RNA sequence (5′-3′)*** | ***Calculated oligonucleotide mass*** | ***MALDI-MS [M-H]- m/z*** |
| GUCGAC | 1874.2 | 1875.2 |
| GACGUC | 1874.2 | 1874.8 |
| GCAUGC | 1874.2 | 1875.3 |
| GUGCAC | 1874.2 | 1874.6 |
| UAGAGAGAGAAAGUUUCGACUUUCUCUCUCUA | 10171.1 | 10168.9 |
| AGGAGGAGGAGGA | 4345.7 | 4348.8 |
| CCCUCCCUUUUCCCUCCC | 5437.2 | 5437.4 |
| CGUGCGAAUGAACGCACG | 5793.6 | 5793.2 |
| GGCGCAAGCC | 3198.0 | 3200.1 |
| AGAAAGAGAAGA | 3952.5 | 3954.5 |
| UCUUUCUCUUCU | 3608.1 | 3611.4 |
| AMGMAMAMAMGMAMGMAMAMGMAM | 4120.9 | 4122.1 |
| UMCMUMUMUMCMUMCMUMUMCMUM | 3776.4 | 3778.2 |
| U**CL**UUU**CL**UCUU**CL**U | 3686.2 | 3689.6 |
| UM**CL**UMUMUM**CL**UMCMUMUM**CL**UM | 3812.5 | 3812.5 |