**S3 Table.** Thermodynamic parameters of G-quadruplex formation of TBA variants

modified with RNA-iG (**iGR**) or UNA-iG (**iGU**).a

|  |  |  |
| --- | --- | --- |
| **Position of****modification**  | **Sequence****(5ʹ-3ʹ)** | **Average of curve fits** |
| **-ΔH˚ (kcal/mol)** | **-ΔS˚****(eu)** | **ΔG˚37 (kcal/mol)** | **TM** **(˚C)** |
|  | GGTTGGTGTGGTTGG | 41.2±0.9 | 127.2±2.7 | -1.74±0.02 | 50.7 |
| G1 | **iGR**GTTGGTGTGGTTGG | 25.6±3.8 | 87.3±13.6 | 1.49±0.48 | 19.9 |
| G1 | **iGU**GTTGGTGTGGTTGG | 27.9±3.7 | 95.0±12 | 1.55±0.07 | 20.7 |
| G8 | GGTTGGT**iGR**TGGTTGG | 35.3±1.0 | 112.3±3.2 | -0.51±0.02 | 41.6 |
| G8 | GGTTGGT**iGU**TGGTTGG | 35.4±1.0 | 114.8±3.2 | 0.21±0.01 | 35.1 |
| G10 | GGTTGGTGT**iGR**GTTGG | 23.7±5.5 | 77.5±17.9 | 0.39±0.05 | 31.9 |
| G10 | GGTTGGTGT**iGU**GTTGG | 37.1±9.3 | 125.0±30.5 | 1.65±0.33 | 23.8 |
| G1, G8 | **iGR**GTTGGT**iGR**TGGTTGG | 27.3±1.6 | 92.5±5.3 | 1.36±0.14 | 22.3 |
| G1, G8 | **iGU**GTTGGT**iGU**TGGTTGG | n.d. | n.d. | n.d. | <15.0 |
| G8, G10 | GGTTGGT**iGR**T**iGR**GTTGG | 32.4±2.3 | 105.4±7.4 | 0.31±0.01 | 34.1 |
| G8, G10 | GGTTGGT**iGU**T**iGU**GTTGG | n.d. | n.d. | n.d. | <15.0 |
| G1, G10 | **iGR**GTTGGTGT**iGR**GTTGG | n.d. | n.d. | n.d. | <15.0 |
| G1, G10 | **iGU**GTTGGTGT**iGU**GTTGG | n.d. | n.d. | n.d. | <15.0 |
| G1, G8, G10 | **iGR**GTTGGT**iGR**T**iGR**GTTGG | n.d. | n.d. | n.d. | <15.0 |
| G1, G8, G10 | **iGU**GTTGGT**iGU**T**iGU**GTTGG | n.d. | n.d. | n.d. | <15.0 |

 a buffer: 100 mM KCl, 20 mM sodium cacodylate, 0.5 mM EDTA(Na)2, pH 7.0;

n.d. – not determined