

Supporting Information for:

**Positional Impact of Fluorescently Modified G-Tetrads within Polymorphic Human
Telomeric G-Quadruplex Structures**

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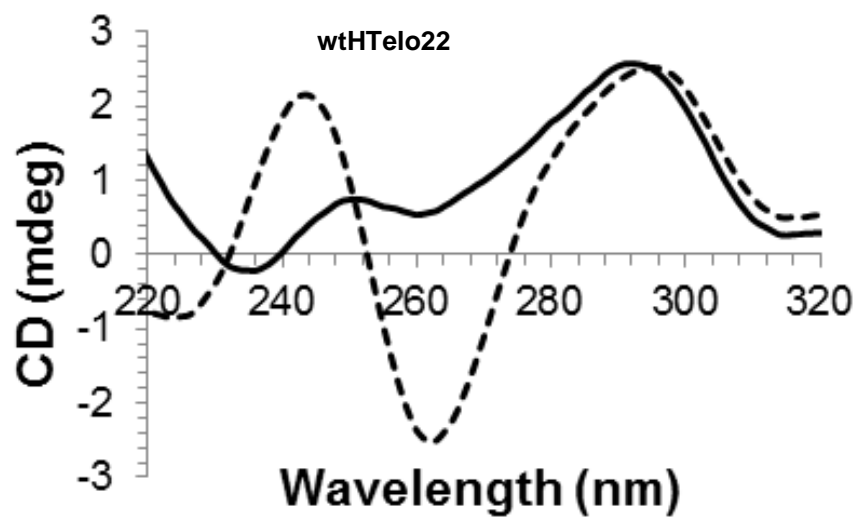


Figure S1. CD spectral overlays of wtTelo22 GQs in Na⁺ (dotted line) and K⁺ (solid line) solutions.

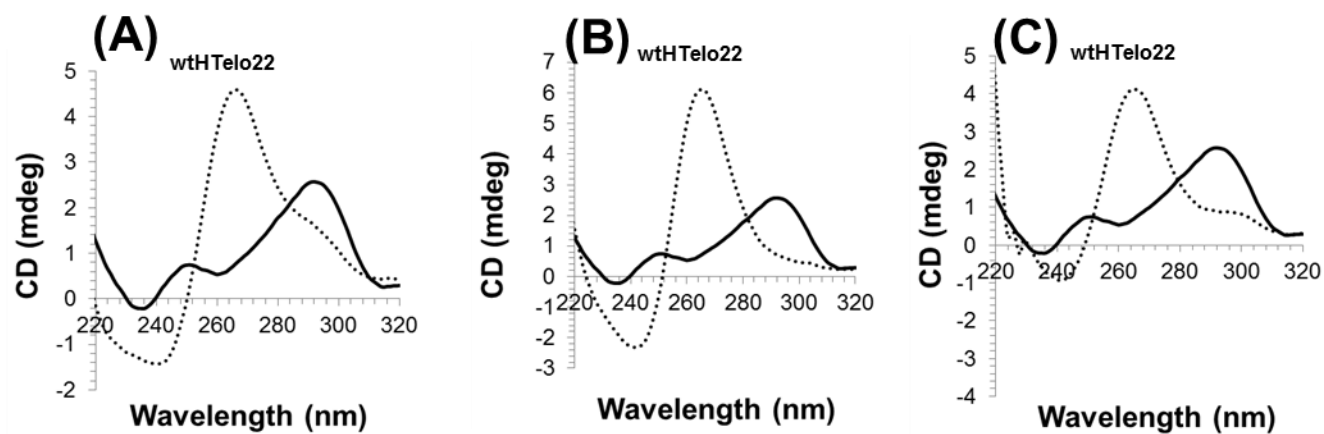


Figure S2. CD spectra of wtHTelo22 GQs in K^+ solution in the presence of various additives (A) + 42.5% (v/v) CH_3CN , (B) + 42.5% (v/v) PEG-600, (C) + 5 equiv. NMM, solid lines = GQs in K^+ solution, dotted lines = GQs in K^+ solution + additive.

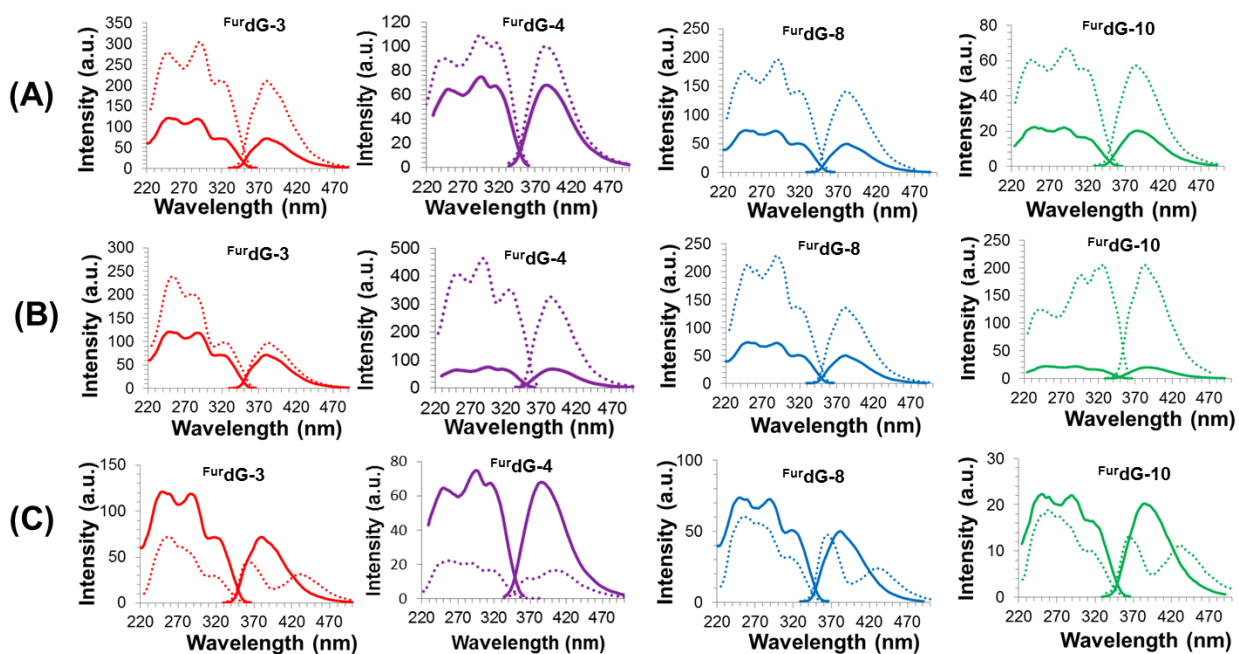


Figure S3. Excitation and emission spectra of mHTelo22 GQs in K^+ solution in the presence of various additives (A) + 42.5% (v/v) CH_3CN , (B) + 42.5% (v/v) PEG-600, (C) + 5 equiv. NMM, solid lines = GQs in K^+ solution, dotted lines = GQs in K^+ solution + additive.

Table S1. ESI⁻ MS Analysis of C-link Modified TBA Oligonucleotides

Oligonucleotide	Product Formula	calcd mass ^a	exptl m/z (ESI ⁻) ^b	exptl mass
mHTelo22 (X = Fur dG)	C ₂₂₄ H ₂₇₃ N ₉₂ O ₁₃₃ P ₂₁	7031.2	$[M - 8H]^{8-} = 877.9$	7031.2
			$[M - 9H]^{9-} = 780.3$	7031.7
			$[M - 10H]^{10-} = 702.1$	7031.0
			$[M - 11H]^{11-} = 638.5$	7031.2

^a Monoisotopic mass of most abundant isotopologue. ^b Measured m/z from mass spectrum.

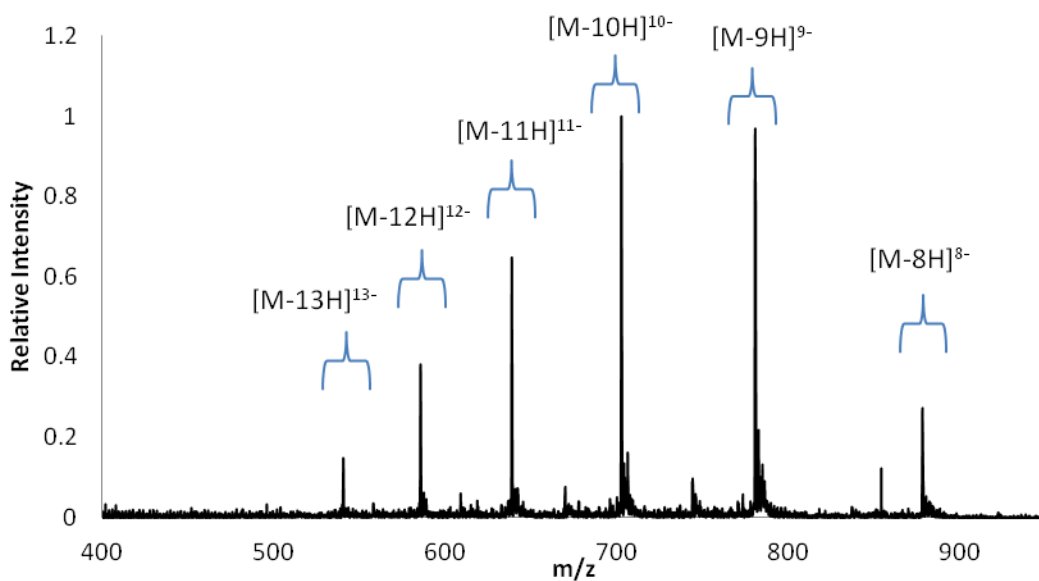


Figure S4. Mass spectrum of Fur dG-mHTelo22 obtained with an ESI source operated in negative mode.