Energy of R-loop length at n = 600 juncE (a)= 0 dgmin00 dgmin07 dgmin14 500 af(seqtype) Energy (kcal/mol) — pFС9 — pFC9\_circ — T7\_init\_VR\_10 T7\_init\_VR\_10\_circ — T7\_init\_VR\_20 T7\_init\_VR\_20\_circ 100 -250 750 1000 250 500 750 1000 250 500 750 1000 500 Nucleotides in R-loop

Energy of R-loop length at n = 600 juncE (a)= 10 dgmin00 dgmin07 dgmin14 500 -400 af(seqtype) Energy (kcal/mol) — pFС9 — pFC9\_circ — T7\_init\_VR\_10 T7\_init\_VR\_10\_circ — T7\_init\_VR\_20 T7\_init\_VR\_20\_circ 100 -250 750 1000 250 500 750 1000 250 500 750 1000 500 Nucleotides in R-loop

Energy of R-loop length at n = 600 juncE (a)= 25 dgmin00 dgmin07 dgmin14 500 af(seqtype) Energy (kcal/mol) — pFС9 — pFC9\_circ — T7\_init\_VR\_10 T7\_init\_VR\_10\_circ T7\_init\_VR\_20 T7\_init\_VR\_20\_circ 100 -250 750 1000 250 500 750 1000 250 500 750 1000 500 Nucleotides in R-loop

Energy of R-loop length at n = 600 juncE (a)= 50 dgmin00 dgmin07 dgmin14 af(seqtype) Energy (kcal/mol) — pFС9 — pFC9\_circ — T7\_init\_VR\_10 T7\_init\_VR\_10\_circ T7\_init\_VR\_20 T7\_init\_VR\_20\_circ 250 750 1000 250 500 750 1000 0 250 500 750 1000 500 Nucleotides in R-loop

