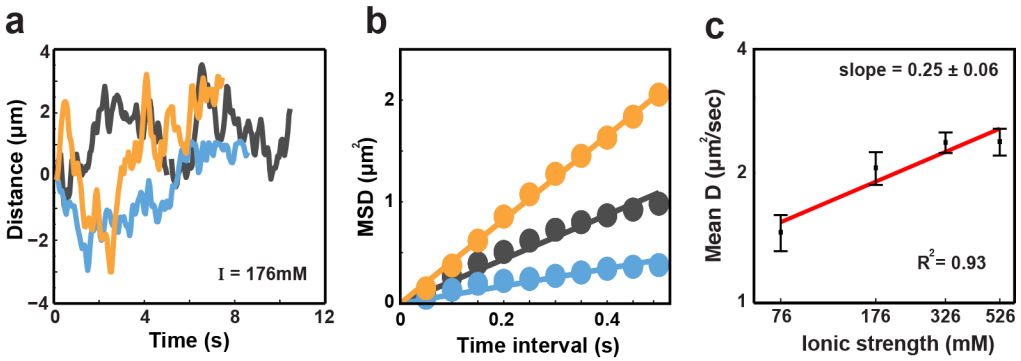

Figure S1. Characterization of *S. cerevisiae* PCNA diffusion on λ-DNA. (a) Representative single-molecule traces of the position of individual PCNA molecules (shown in three different colors) on DNA at a total ionic strength I=176 mM. (b) Mean squared displacement (MSD) of each of the molecules in (a). The MSDs are fit to a line, and the slopes are used to calculate the one-dimensional diffusion coefficients (solid lines). (c) Mean PCNA diffusion coefficients as a function of the ionic strengths (error bars: S.E). The red line indicates a linear fit through the data as a function of the ionic strength. The slope of the linear regression estimates the number of screened charges between the PCNA ring and the DNA track (error: standard error of the fit). (N=30, 29, 29, 31 for 76 mM, 176 mM , 326 mM, and 525 mM ionic strengths, respectively).

Table S1. Oligonucleotides

Name	Sequence
AD006	TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCTTCCCTTGGTGCGATCGCTCTTCG
AD012	AGTCTGGATAGCCATAAGTG
AD013	GTAACCACATACTTCCTGCC
AD016	GCAGTCTGTCAGTCAGTGCG
AD017	CGAGGGCATTGCAGTAATTG
AD022	CGTTCATGGCTGAACTCCTG
AD023	CGGCATAACATGCAGTGGAC
AD024	GTGATGTTGCTGCGCTCGATG
AD025	CTCAGCCTGGGTCATTGAAG
AD027	GCTACCACCATGACTAACGC
AD028	GGATATCAGAGCTATGGCTC
AD031	CCGCGATTGCAGATGTTATC
AD032	CTATACAGCCAAGCTTGCAG
MB032	TGCATGCGGCCGCTCTTCCCATGGTGCGATCGCTCTTCG
IF003	/5Phos/AGGTCGCCGCCC/3BioTEG
IF004	/5Phos/GGGCGGCGACCT/3Dig_N
YK_PCNA01	/5phs/GATGACGACAAGCATCATCATCAT
YK_PCNA02	GTCTTTGTAGTCGCTGCTGCTGCCCATGGTAT