

Data analysis

1] Movies were recorded using an EMCCD camera in 3x3 pixel, typically each movie lasted for about 1-2 mins.

2] The movies were converted into fluorescent traces using codes written in IDL.

3] The traces were analyzed by manual visual inspection. Traces with defined steps were taken into account and the more noisy traces were omitted. On average about 60% of traces were useful.

4] The data were normalized as follows:

In X number of movies, Y number of traces were analyzed out of which say Z is the number of a given species observed. Normalization of events= Z/Y

Table 1: Summary of data. The number inside the parenthesis is the normalized value of the events for that species and the population of hexamer is indicated as % of all species.

Control Data	Gp59	Gp59+gp32	Gp59+gp41	Gp59+gp32+gp41
Monomer	562(0.64)	861(0.715)	653(0.617)	471(0.649)
Dimer	308(0.352)	334(0.277)	323(0.306)	255(0.351)
Trimer	7(0.008)	3(0.002)	81(0.076)	0.0
Tetramer	0.0	6(0.005)	0.0	0.0
Total no. of complexes analyzed	876	1204	1057	726

Data with forked DNA	Gp59	Gp59 +gp32	Gp59 +gp41	Gp59 +gp32+gp41	Gp59*	Gp59* +gp32	Gp59* +gp41	Gp59* +gp32+gp41
Monomer	990 (0.473)	1503 (0.622)	1197 (0.429)	1091 (0.437)	1174 (0.419)	1431 (0.615)	1153 (0.481)	1117 (0.437)
Dimer	671 (0.32)	590 (0.244)	956 (0.343)	784 (0.314)	875 (0.312)	664 (0.285)	707 (0.295)	802 (0.314)
Trimer	234 (0.112)	55 (0.024)	391 (0.14)	406 (0.162)	451 (0.161)	191 (0.082)	325 (0.136)	415 (0.162)
Tetramer	75 (0.036)	54 (0.022)	114 (0.041)	63 (0.025)	128 (0.046)	21 (0.009)	113 (0.0467)	65 (0.025)
Pentamer	43 (0.02)	161 (0.067)	42 (0.015)	52 (0.021)	55 (0.02)	13 (0.006)	29 (0.012)	54 (0.021)
Hexamer	86 4.1%	54 2.2%	90 3.2%	100 4%	120 4.3%	20 1%	61 2.5%	112 4.4%
Total no. of complexes analyzed	2099	2415	2790	2497	2803	2340	2388	2565

* indicates gp59 labelled with Alexa555.