

Table 1. Average diffusion constants and mobile fractions of mRNA particles

RNA	Diffusion constant, $\mu\text{m}^2/\text{sec}$			Fraction of mobile particles, %		
	37°C	25°C	–ATP, 37°C	37°C	25°C	–ATP, 37°C
Endogenous nuclear	0.033	0.018	0.034	53	33	26
Synthetic nuclear	0.061	0.043	0.043	72	43	52
Endogenous cytoplasmic	0.029	0.021	0.035			
Synthetic cytoplasmic	0.096	0.033	0.087			

For each category, we analyzed an average of 15 tracks distributed among 6 cells, with each track persisting for an average of 55 frames and no track persisting for <20 frames. SDs and additional data are presented in Table 2.