Supplementary Data

Supplementary Table I Parameters used in the simulation

Parameters	Description	Value
μ	dynamic viscosity	7.98e-4 PaS
ρ	fluid's density	1000 kg/m^3
D	diffusion coefficient of bulk molecules**	8.5e-12 m^2/s
D_s	surface diffusivity	1e-13 m^2/s
c_0	Initial bulk concentration **	2e-4 mol/m^3
k_{ads} θ	rate constant for adsorption *	1e-3 s^{-1}
k_{des}	rate constant for desorption*	1e-6 s^{-1}

* Obtained from Calonder et al., *PNAS*, 2001; ** Corresponds to the experimental conditions, as described in the main text

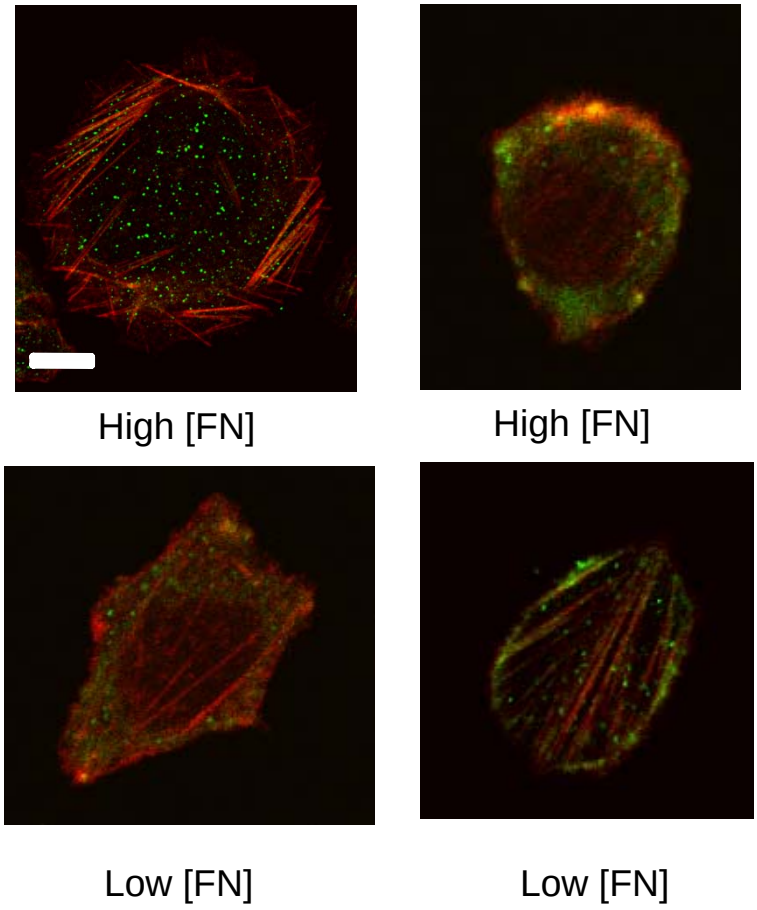

Figure S1 Comparison of the immunostained CHO cells cultured inside the channel (left panels) and on a coverslip outside the channel (right panel). The FN concentrations used for coating the coverslip outside the channel are 100 μg/ml (high) and 40 μg/ml (low), with 1 hr. coating time. Actin stress fibers (red) were labelled using phalloidin staining and myosin heavy chain II (MHCII) was labelled

using an anti-MHCII antibody (green) as described in Methods.