

Supporting Information Available. DLS results by Cumulant analysis in a KCl-free G-buffer at pH 7.4 and 25°C. Closed and open symbols show Cumulant and CONTIN analyses. Relationships between $1/\tau$ and q^2 at actin concentrations of (a) 0.84 (b) 2.1 and (c) 2.5 $\text{mg} \cdot \text{ml}^{-1}$. Since the linear relationship was not obtained by Cumulant analysis at any actin concentrations, the D was defined using τ only at $\theta=90^\circ$. (d) Diffusion coefficients as a function of actin concentration. The D_0 and concentration virial coefficient were determined using Cumulant as $96.2 \times 10^{-12} \text{ m}^2 \cdot \text{s}^{-1}$ and $2.72 \times 10^{-12} \text{ m}^2 \cdot \text{ml} \cdot \text{s}^{-1} \cdot \text{mg}^{-1}$ at 25°C by fitting five points at the lower actin concentrations.

