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## Ever-fluctuating single enzyme molecules

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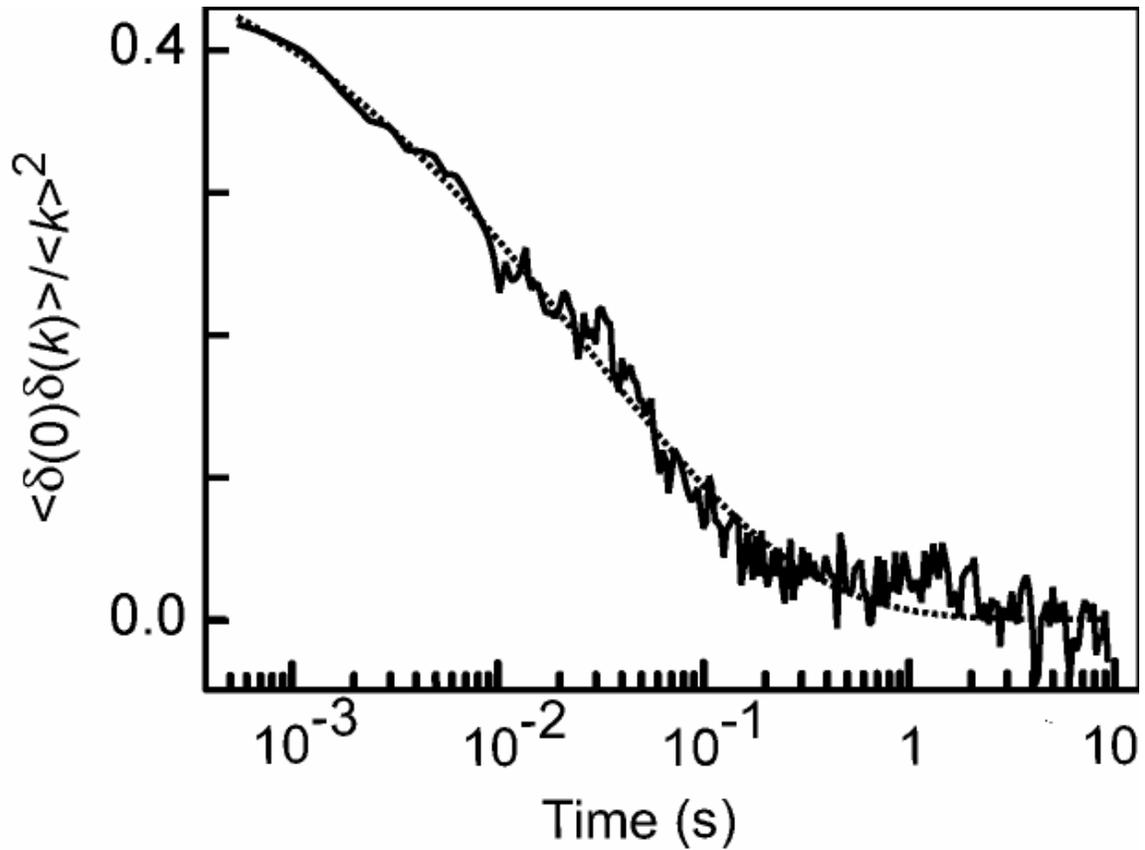
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**Supplementary Figure 7** Autocorrelation of  $k(t)$ .

$k(t)$ ,  $\langle \delta k(0)\delta k(t) \rangle / \langle k \rangle^2$ , obtained from a single enzyme molecule at 100  $\mu\text{M}$  RGP concentration. The dotted curve depicts the best fit to a stretched exponential decay,  $k(t) = k(0) \exp[-(t/t_0)^\beta]$ , with  $\beta = 0.43$  and  $t_0 \sim 20$  ms. The broad range of time scales of  $k$  fluctuation is evident.