

TABLE 1 Mobility of proteins in the cytoplasm of cultured muscle cells

Protein	M_r	D_w ($\mu\text{m}^2 \text{s}^{-1}$)	R_h (nm)*	D_{cyt} ($\mu\text{m}^2 \text{s}^{-1}$)	D_{cyt}/D_w
Myokinase	21,000	160 ± 30	1.3 ± 0.2	$46 < D_{\text{cyt}} < 93$	$0.3 < D_{\text{cyt}}/D_w < 0.6$
Phosphoglucomutase	60,000	63 ± 8	3.4 ± 0.4	16.5 ± 3	0.26 ± 0.024
β -Enolase	90,000	56 ± 6	3.8 ± 0.4	10.8 ± 2	0.19 ± 0.024
IgG	160,000	40 ± 5	5.4 ± 0.7	5.5 ± 1	0.14 ± 0.023
β -Galactosidase	540,000	30 ± 3	7.2 ± 0.7	0.004 ± 0.0007	0.00013 ± 0.00004
EGFP	27,000	87 ± 16	2.4 ± 0.4	15.8 ± 3	0.18

*The hydrodynamic radius, R_h , was calculated from the Stokes-Einstein equation: $D = kT/6\pi\eta R_h$.