

TABLE I

Diffusion Coefficients of Some Proteins in Living Cells<sup>a</sup>

Protein	Aqueous D <sup>b</sup> ( $\mu\text{m}^2/\text{sec}$ )	Radius (nm)	Cytoplasmic D( $\mu\text{m}^2/\text{sec}$ )	D/Do	% mobile	Reference
Insulin	nd	1.6	0.9	(0.007)	87	Jacobson and Wojcieszyn (1984)
CaM	102	2.1	<4	0.039	81	Luby-Phelps <i>et al.</i> , (1985)
Lactalbumin	102	2.1	6.9	0.07	42	Luby-Phelps <i>et al.</i> , (1985)
Green fluorescent protein	nd		43	(0.49)	nd	Yokoe and Meyer (1996)
	87	2.5	27	0.31	82	Swaminathan <i>et al.</i> , (1997)
Ovalbumin	69	3.1	5.9	0.086	78	Luby-Phelps <i>et al.</i> , (1985)
BSA	nd	3.5	1.7	0.027	97	Jacobson and Wojcieszyn (1984)
	67	3.2	6.8	0.1	77	Luby-Phelps <i>et al.</i> , (1985)
Creatine kinase	65	3.3	<4.5	0.07	50-80	Arrio-Dupont <i>et al.</i> , (1997)
Enolase (non-neuronal)	60	3.6	7-11	0.11-0.18	100	Pagliari <i>et al.</i> , (1989)
	56	3.8	13.5	0.24	100	Arrio-Dupont <i>et al.</i> , (1997)
Aldolase	47	4.6	6-11	0.12-0.23	>77	Pagliari and Taylor (1988)
IgG	46	4.7	6.7	0.146	54	Luby-Phelps <i>et al.</i> , (1985)
Apoferritin	nd	6.1	1.6	(0.045)	96	Jacobson and Wojcieszyn (1984)

<sup>a</sup> Numbers in parentheses are calculated using the Stokes-Einstein relation to obtain the aqueous diffusion coefficient expected for a globular protein of the given radius.

<sup>b</sup> nd, not determined.