

TABLE 4.19

Substrate Specificity of the Anion Transporter of Red Blood Cells

Species and anion	Type of measurement	Rate coefficient (min^{-1})	Reference	
Human				
Bicarbonate	Self-exchange, 165 mM, 0°C, pH 8.7	1.92	Wieth (1979)	
Chloride		1.55	Wieth (1979)	
Fluoride		0.23	Wieth (1979)	
Bromide		0.19	Wieth (1979)	
Iodide		0.0062	Wieth (1979)	
Oxalate		Self-exchange, in the presence of 140 mM chloride, substrate at 5 mM, 10° C, pH 7.4	0.075	Deuticke (1982)
Glycolate			0.03	Deuticke (1982)
Lactate			0.001	Deuticke (1982)
Malonate			0.001	Deuticke (1982)
Sulfate			0.0005	Deuticke (1982)
Bovine				
Glycolate-hydrate	Heteroexchange, efflux of chloride into isotonic solution of permea- ting ion, 10°C, pH 7.4	0.26	Deuticke (1982)	
Glycolate		0.12	Deuticke (1982)	
Lactate		0.004	Deuticke (1982)	
2-Hydroxybutyrate		0.0025	Deuticke (1982)	
Pyruvate		0.065	Deuticke (1982)	
2-Oxobutyrate		0.008	Deuticke (1982)	
Chloroacetate		0.046	Deuticke (1982)	
Species and anion	Type of measurement	$t_{1/2}$ (min)	Reference	
Phthalate	Hemolysis in NH_4X isotonic solutions 34°C, pH 7.4	37	Aubert and Motais (1975); Motais (1977) Aubert and Motais (1975);	
Isophthalate		∞	Motais (1977)	
Terephthalate		∞	Aubert and Motais (1975); Motais (1977)	
Hippurate		50	Aubert and Motais (1975); Motais (1977)	
Oxalate		1	Aubert and Motais (1975); Motais (1977)	
Malonate		4	Aubert and Motais (1975); Motais (1977)	
Maleate		5	Aubert and Motais (1975); Motais (1977)	
Fumarate		58	Aubert and Motais (1975); Motais (1977)	
Succinate		78	Aubert and Motais (1975); Motais (1977)	
Glutarate		∞	Aubert and Motais (1975); Motais (1977)	
Benzylsulfonate		(transported)	Aubert and Motais (1975); Motais (1977)	