

Kinetic Attributes of Na⁺, K⁺ ATPase and Lipid / Phospholipid Profiles of Rat and Human Erythrocyte Membrane

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Kinetic properties of Na⁺, K⁺ ATPase of membranes from rat and human erythrocytes were examined. The enzyme stability decreased with incubation time. The V_{\max} of the human enzyme was about 4 times lower than the values of the rat enzyme. However the energies of activation were higher. Phase transition temperature for the rat and the human enzyme was 24 °C and 17 °C, respectively. The human erythrocyte membranes were characterized by lower total phospholipid and cholesterol contents and were relatively more fluid. The human membranes contained lower proportions of acidic phospholipids which correlated well with the lower V_{\max} of the enzyme; the proportion of lysophosphoglyceride and sphingomyelin was higher in the human membrane.