Voltage-dependent conductance induced by hemocyanin in black lipid films

Alvarez, Osvaldo

Diaz, Eliecer

Latorre, Ramon

When hemocyanin is added to a black lipid film, the conductance increases in discrete steps. For negative potentials the single step conductance is constant, but for positive potentials the step conductance appears to decrease as the potential increases. At high positive potentials the conductance fluctuates between several levels. These data suggest that, in lipid membranes, hemocyanin conducts ions through discrete channels. The voltage-dependent conductance observed at high levels of conductance seems to be a consequence of the properties of the conductance of the single channel.