

Structure and function of G proteins

Olate, Juan

Allende, Jorge E.

G proteins are heterotrimeric proteins involved in the transduction of a variety of external signals in all eukaryotic organisms. This review analyzes the molecular aspects of G protein structure and function. The cloning of cDNAs coding for a great variety of G protein subunits has allowed us to deduce the primary and secondary structure of the subunits. Emphasis is given to the dissection of the molecular regions of the G α subunits implicated in the binding and hydrolysis of GTP and in the interaction with the receptor, with the effector and with the $\beta\gamma$ dimer. The localization of these regions in a two-dimensional model of the G α subunit is attempted to provide a more comprehensive view of the structure and function of G proteins. © 1991.