Tight junction protein 1

Zonula occludens-1 ZO-1, also known as Tight junction protein-1 is a 220-kD peripheral membrane protein that is encoded by the TJP1 gene in humans.

It belongs to the family of zona occludens proteins (ZO-1, ZO-2, and ZO-3), which are tight junction-associated proteins, and of which, ZO-1 is the first to be cloned. It was first isolated in 1986 by Stevenson and Goodenough using a monoclonal antibody raised in rodent liver to recognize a 225-kD polypeptide in whole liver homogenates and in tight junction-enriched membrane fractions.

It has a role as a scaffold protein that cross-links and anchors Tight Junction (TJ) strand proteins, which are fibril-like structures within the lipid bilayer, to the actin cytoskeleton.