

# Tight Junction Antibody Sampler Kit

Cat# AK0272

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

## PRODUCT DESCRIPTION

Tight junctions, or zona occludens, form a continuous barrier to fluids across the epithelium and endothelium. They function in regulation of paracellular permeability and in the maintenance of cell polarity, blocking the movement of transmembrane proteins between the apical and basolateral cell surfaces. Tight junctions are composed of claudin and occludin transmembrane proteins, which join the junctions to the cytoskeleton. The claudin family is composed of 23 integral membrane proteins, and their expression, which varies among tissue types, may determine both the strength and properties of the epithelial barrier. Zona occludens proteins ZO-1, -2, and -3 (also known as TJP1, 2, and 3) are peripheral membrane adaptor proteins that link junctional transmembrane proteins such as occludin and claudin to the actin cytoskeleton. ZO-1 and ZO-2 are required for tight junction formation and function. In subconfluent proliferating cells, ZO-1 and ZO-2 have been shown to colocalize to the nucleus and play a role in transcriptional regulation. Exogenous expression of the amino terminal portion of ZO-3 exerts a dominant negative effect that interferes with assembly of tight junctions and adherens junctions. ZO-1 has been shown to interact with afadin prior to the formation of tight junctions. Recent work has also shown that afadin is involved in controlling the directionality of cell movement when it is localized at the leading edge of moving cells. CD2AP is a scaffolding protein that is thought to link membrane proteins to the cytoskeleton. It plays a role in the formation of tight junctions in specialized cell types such as the slit diaphragm of the kidney glomerulus. CD2AP is also involved in the immunological synapse between CD2-expressing T cells and antigen presenting cells. Research studies have shown that interaction between CD2AP and other cytoskeletal proteins may regulate the endocytosis of EGFR.

## PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
<b>A340160</b>	CD2AP Polyclonal Antibody	20µL	WB, IHC, ELISA	Human	Rabbit
<b>A340484</b>	Claudin 1 Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
<b>A1013s</b>	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat

## **PRODUCT USE LIMITATION**

These products are intended for research use only.