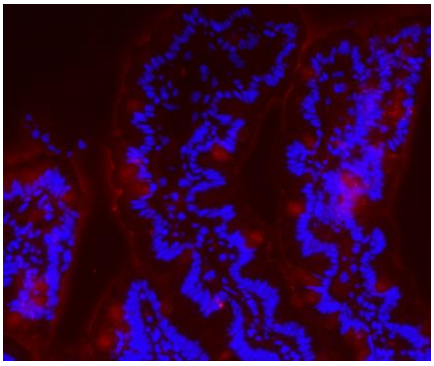
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	ZO-1, Human, pAb		
Catalog number	HP9056-20UG		
Lot number	-	**Expiry date**	-
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Rabbit Ig	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein A
Storage	4°C		

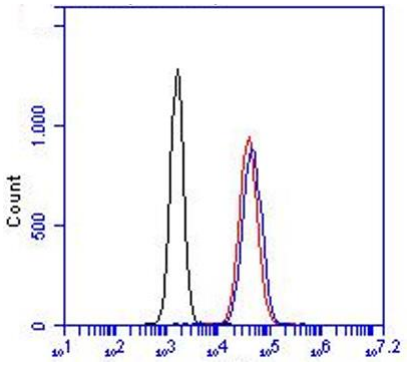
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes			●	●				
No	●	●						
N.D.					●	●	●	●

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



IF: Immuno fluorescence staining in Huvec cells.



FC: flow cytometry with Huvec cells. The black line represents the cells only, the red line the control and the blue line HP9056 in a concentration of 1 µg/250000 cells.

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IF: For Immunofluorescence intracellular staining is required. Cells were fixed with 4% paraformaldehyde and cells were permeabilized with PBS, 0.1% saponin and 0.5% BSA.
- FC: For intracellular staining Huvec cells were permeabilized with buffer containing 0.1% saponin and 0.5% BSA.

General Information

Description

The polyclonal antibody recognizes human zona occludens 1 (ZO-1), an ~220 kDa tight junction protein belonging to the membrane-associated guanlyate kinase (MAGUK) family. Members of this family are involved in epithelial and endothelial intercellular junctions. They each contain at least one PSD95/Dlg/ZO-1 (PDZ) domain, a Src homology 3 (SH3) domain, and an enzymatically inactive guanylate kinase domain. PDZ domains are 90-amino acid protein-protein binding domains that recognize at least a 3-residue peptide motif in the COOH termini of their binding partners. PDZ domain-containing proteins, like ZO-1, typically act as scaffolding proteins that organize membrane receptors and cytosolic proteins into multimeric signaling complexes often at the sites of cell-cell contact. The effectiveness and stability of the epithelial barrier depends on a complex of proteins composing different intercellular junctions, which include tight junctions, adherens junctions, and desmosomes. ZO-1 is a peripheral membrane protein bound on the cytoplasmic surface of junctional contacts and is expressed in all tight junctions regardless of their properties. ZO-1 immunoprecipitates with its family member ZO-2. ZO-1 was shown to undergo tyrosine phosphorylation during tight junction formation and remodeling. Two different isoforms of ZO-1, alpha-minus and alpha-plus, have been described, which result from alternative splicing of an mRNA encoded by a single gene. The ZO-1 alpha-plus contains an 80

	amino acids motif called alpha which is not present in ZO-1 alpha-minus. The alpha-containing isoform is found in most epithelial cell junctions. The short isoform (ZO-1 alpha-minus) is found both in endothelial cells and the highly specialized epithelial junctions of renal glomeruli and Sertoli cells of the seminiferous tubules. This difference in distribution provides molecular distinction among tight junctions. The polyclonal antibody was raised against amino acids 432-1150 of human ZO-1 and recognizes both ZO-1 alpha-minus and alpha-plus. It cross reacts with mouse and dog ZO-1.
Immunogen	Recombinant human GST-ZO-1 (aa 1-888)
Aliases	Tight junction protein 1 (TJP1)
Gene	Gene name : TJP1, ZO1
Cross reactivity	Mouse : Yes; Dog : Yes.
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Brenda Teunissen	14/07/2021

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.