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DATA SHEET

Mouse Anti-Claudin 1 [MD376]: MC0087

Intended Use: For Research Use Only

Description: Claudin 1 is an essential member of the claudin family, which forms the backbone of tight junctions in epithelial and endothelial cells, regulating paracellular transport. Structurally, claudin 1 spans the membrane with four transmembrane domains and two extracellular loops, which are critical in forming tight junction strands that create selective barriers between cells. This unique structure allows claudin 1 to participate in maintaining cellular polarity and controlling ion permeability, vital functions in organs like the liver and kidney, where claudin 1 is most abundantly expressed. The structural configuration of claudin 1 also facilitates interactions with other tight junction proteins, such as occludins and junctional adhesion molecules, enabling complex tissue compartmentalization. Claudin 1 is a protein that plays a key role in maintaining the integrity and permeability of tight junctions, which are cell-to-cell connections that seal the gaps between epithelial cells.

Specifications:

Clone:	MD376
Source:	Mouse
Isotype:	IgG2b/κ
Reactivity:	Human, mouse, rat
Immunogen:	Epitope aa 168-207 of human Claudin 1 C-terminus
Localization:	Cytoplasm
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3).
Storage:	Store at 2°- 8°C
Applications:	IHC, ELISA, IF, IP, WB

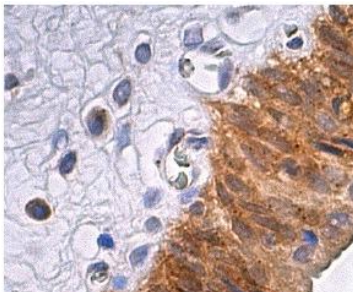
Package:

Description	Catalog No.	Size
Claudin 1 Concentrated	MC0087	1 ml

IHC Procedure*:

Positive Control Tissue:	Skin, breast carcinoma, ovarian carcinoma, urinary bladder
Concentrated Dilution:	25-200
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	30-60 minutes @ RT
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.



FFPE human urinary bladder stained with anti-Claudin 1 using DAB

References:

1. Identification and characterization of a first-generation inhibitor of claudin-1 in colon cancer progression and metastasis. | Fatima, I., et al. Biomed Pharmacother. 159: 114255, 2023.
2. The Role of Claudin-1 Expression in Follicular and Papillary Thyroid Neoplasm. Miskad, UA., et al. Asian Pac J Cancer Prev. 23: 4023-4027, 2022.
3. Clostridium perfringens enterotoxin binds to the second extracellular loop of claudin-3, a tight junction integral membrane protein. Fujita, K., et al. FEBS Lett. 476: 258-61, 2000.

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