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Claudin-18 Mouse mAb

Catalog # AP99622

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P56856
Other Accession	P56856
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	27856
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Claudin-18
Isotype	IgG1, Kappa
Purity	affinity purified by Protein A
Buffer	Liquid in PBS containing 50% Glycerol, 0.5% BSA and 0.02% Proclin300.
SIMILARITY	Belongs to the claudin family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The Claudin superfamily consists of many structurally related proteins in humans (1). These proteins are important structural and functional components of tight junctions in paracellular transport (1,2). Claudins are located in both epithelial and endothelial cells in all tight junction-bearing tissues (1). Three classes of proteins are known to localize to tight junctions, including the Claudins, Occludin and Junction adhesion molecule (3). Claudins, which consist of four transmembrane domains and two extracellular loops make up tight junction strands (4). Emerging evidence suggests that the Claudin family of proteins regulates transport through tight junctions via differential discrimination for solute size and charge (5).Claudin expression is often highly restricted to specfic regions of different tissues and may have an important role in transcellular transport through tight junctions (6).

Additional Information

Gene ID	51208
Other Names	SFTA5; SFTPJ; CLD18_HUMAN; CLDN18; CLD18_MOUSE; D3ZLY1_RAT; claudin 18; surfactant associated protein J
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	CLDN18
Function	Involved in alveolar fluid homeostasis via regulation of alveolar epithelial tight junction composition and therefore ion transport and solute permeability, potentially via downstream regulation of the actin cytoskeleton organization and beta-2-adrenergic signaling (By similarity). Required for lung alveolarization and maintenance of the paracellular alveolar epithelial barrier (By similarity). Acts to maintain epithelial progenitor cell proliferation and organ size, via regulation of YAP1 localization away from the nucleus and thereby restriction of YAP1 target gene transcription (By similarity). Acts as a negative regulator of RANKL-induced osteoclast differentiation, potentially via relocation of TJP2/ZO-2 away from the nucleus, subsequently involved in bone resorption in response to calcium deficiency (By similarity). Mediates the osteoprotective effects of estrogen, potentially via acting downstream of estrogen signaling independently of RANKL signaling pathways (By similarity).
Cellular Location	Cell junction, tight junction {ECO:0000250|UniProtKB:P56857}. Cell membrane {ECO:0000250|UniProtKB:P56857}; Multi-pass membrane protein. Note=Localizes to tight junctions in epithelial cells {ECO:0000250|UniProtKB:P56857} [Isoform A2]: Cell junction, tight junction {ECO:0000250|UniProtKB:P56857}. Lateral cell membrane {ECO:0000250|UniProtKB:P56857}
Tissue Location	[Isoform A1]: Expression is restricted to the lung.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.