Revision 1

Store at -20C

#28530

Claudin-2 (E1H9O) Rabbit mAb (IHC Formulated)

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IHC-P	H M	Endogenous	Rabbit IgG	#P57739	9075

Product Usage Information

Application	Dilution
Immunohistochemistry (Paraffin)	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Claudin-2 (E1H9O) Rabbit mAb (IHC Formulated) recognizes endogenous levels of total claudin-2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp196 of human claudin-2 protein.

Background

Tight junctions, or zonula 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 the basolateral cell surfaces. Tight junctions are composed of claudin and occludin proteins, which join the junctions to the cytoskeleton (1,2). 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. Alteration in claudin protein expression pattern is associated with several types of cancer (2,3). Claudin-1 is expressed primarily in keratinocytes (4) and normal mammary epithelial cells, but is absent or reduced in breast carcinomas and breast cancer cell lines (5,6).

Claudin-2 is expressed primarily in the proximal tubule of the normal mammalian kidney, where it regulates transepithelial ion (e.g., Na^+, Cl^-) reabsorption (7). Increased expression of claudin-2 has been reported in some cancer cell lines (8), including A549 lung adenocarcinoma cells, where its nuclear distribution was positively associated with enhanced proliferation (9).

Background References

1. Shin, K. et al. (2006) *Annu Rev Cell Dev Biol* 22, 207-35.
2. Oliveira, S.S. and Morgado-Díaz, J.A. (2007) *Cell Mol Life Sci* 64, 17-28.
3. Hewitt, K.J. et al. (2006) *BMC Cancer* 6, 186.
4. Brandner, J.M. et al. (2002) *Eur J Cell Biol* 81, 253-63.
5. Krämer, F. et al. (2000) *Hum Genet* 107, 249-56.
6. Swisshelm, K. et al. (1999) *Gene* 226, 285-95.
7. Muto, S. et al. (2010) *Proc Natl Acad Sci U S A* 107, 8011-6.
8. Ikari, A. et al. (2012) *Biochim Biophys Acta* 1823, 1110-8.
9. Ikari, A. et al. (2014) *Biochim Biophys Acta* 1843, 2079-88.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IHC-P: Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **M:** Mouse

Trademarks and Patents

Limited Uses

separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.