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Product Information

Anti-Claudin-5 (C-terminal)
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200538**

Product Description

Anti-Claudin-5 (C-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the C-terminus of human claudin-5 (GeneID: 7122), conjugated to KLH. The corresponding sequence is highly conserved in mouse claudin-5 (single amino acid substitution) and in rat claudin-5 (89% identity). The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Claudin-5 (C-terminal) specifically recognizes human claudin-5. The antibody may be used in immunoblotting (~23 kDa), immunofluorescence and immunohistochemistry. Detection of the claudin-5 band by immunoblotting is specifically inhibited by the claudin-5 immunizing peptide.

The claudins comprise a large family of highly related proteins, important in tight junctions (TJs) structure and function. TJs are crucial to form diffusion barriers and in regulating paracellular transport both in epithelium and endothelium.[1,2] Three classes of proteins are known to localize to TJs, including the claudins, occludin and junction adhesion molecules (JAMs). Claudins consist of four transmembrane domains and two extracellular loops, required to form tight junction strands. Expression of claudins is often highly restricted to specific regions of different tissues and may have an important role in transcellular transport through tight junctions. Claudins are located in both epithelial and endothelial cells in tissues. Claudin-5 (also known as CLDN5, BEC1, TMVCF and CPETRL1) is enriched in endothelial cells (ECs), including the blood-brain barrier.[3,4] Claudin-5 gene is a downstream target of ERG, a transcription factor that regulates EC-restricted genes and is markedly repressed in response to inflammatory stimuli. Knockout of claudin-5 in mice is lethal, resulting in disruption of in the blood-brain barrier. Claudin-5 has been shown to be over-expressed in various tumors including lung adenocarcinomas but undetectable in squamous cells cell carcinomas.[5,6]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1-2 µg/mL is recommended using extracts of OVCAR-3 cells.

Immunofluorescence: a working concentration of 1-2 µg/ml is recommended using MCF7 cells.

Immunohistochemistry: a working concentration of 20 µg/ml is recommended using formalin-fixed, paraffin-embedded human heart.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

1. Heiskala, M., et al., *Traffic*, **2**, 93-98 (2001).
2. Rahner, C., et al., *Gastroenterol.*, **120**, 411-422 (2001).
3. Yuan, L., et al., *J. Biol. Chem.*, **287**, 6582-6591 (2012).
4. Taddei., A., et al., *Nature Cell Biol.*, **10**, 923-934 (2008).
5. Soini, Y., *Histopathol.*, **46**, 551-560 (2005).
6. Paschoud, S., et al., *Mod. Pathol.*, **20**, 947-954 (2007).

ER,KCP,PHC 12/12-1