

Claudin-18 ABfinity™ Recombinant Rabbit Monoclonal Antibody - Purified



REF Catalog no. 700178

(See product label for lot information)

Clone/PAD: 34H14L15
Isotype: IgG
Gene ID: 51208
Protein Acc. no.: P56856
Qty: 100 µg
Volume: 200 µl
Concentration: 0.5 mg/ml

Formulation

PBS + 0.09% azide

Immunogen

A peptide corresponding to amino acids 224-237 of P56856.

Immunogen sequence

GFKASTGFGSNTKNH

Reactivity

This antibody reacts with human and mouse Claudin-18. Based on sequence identity and similarity, reactivity to chimpanzee, Rhesus monkey, equine, and rat is expected.

Storage

2-8°C for up to 1 mo, -20°C for long term storage. Avoid repeated freezing and thawing.



Expiration Date

Expires one year from date of receipt when stored as instructed.

Validated Applications:

	Species	Test Material	Concentration
Western Blotting	mouse	lung	2-3 µg/ml
Immunohistochemistry	human	normal stomach, squamous lung carcinoma	2-4 µg/ml

Background

Claudin-18 is a tight junction protein expressed as lung- and stomach-specific isoforms which are generated by alternative splicing of the claudin-18 gene (1). The lung-specific form is a downstream target gene regulated by the T/EBP/NKX2.1 transcription factor (1). A splice variant lacking the C-terminal cytoplasmic domain also exists in mouse, but has not been confirmed in human (1). Human claudin-18 demonstrates 88% amino acid sequence identity to the mouse protein (1). Immunohistochemical studies have demonstrated complete membrane localization of claudin-18 in lung and stomach epithelial cells, while electron microscopy has shown that it is concentrated in the cell-cell borders of these cells (1). These features suggest a potentially important role for claudin-18 in the structure and function of tight junctions in the lung and stomach (1). Claudin-18 expression has also been reported in the inner ear (2). Because of its highly restricted expression pattern in normal tissues and frequent activation in numerous human cancers, claudin-18 may represent an important target for antibody therapy (3).

References

1. Niimi T, et al. (2001) Claudin-18, a novel downstream target gene for the T/EBP/NKX2.1 homeodomain transcription factor, encodes lung- and stomach-specific isoforms through alternative splicing. *Mol Cell Biol* 21:7380-7390.
2. Kitajiri SI, et al. (2004) Expression patterns of claudins, tight junction adhesion molecules, in the inner ear. *Hear. Res.* 187:25-34.
3. Sahin, U. et al. (2008) Claudin-18 splice variant 2 is a pan-cancer target suitable for therapeutic antibody development. *Clin. Cancer Res.* 14:7624-34.

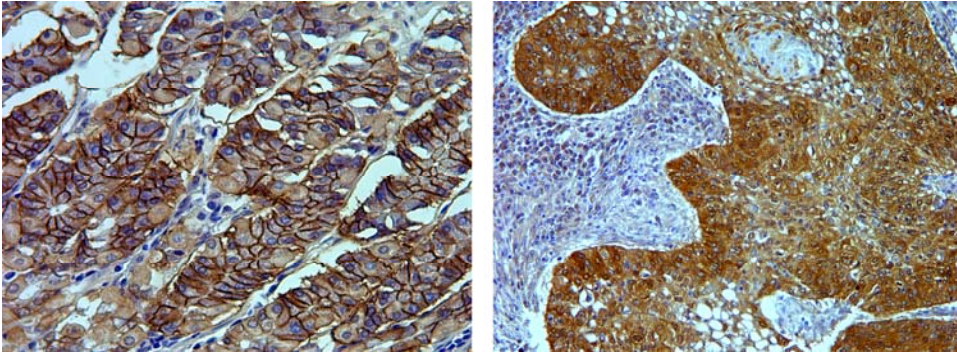
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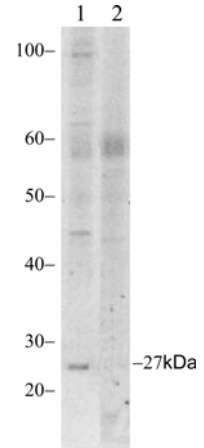
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Immunohistochemistry of human normal stomach and squamous lung carcinoma tissue labeled with rabbit anti-Claudin-18 (Cat. No. 700178).

FFPE human normal stomach (left) and squamous lung carcinoma (right) tissues were labeled with rabbit anti-Claudin-18 (2 µg/ml). Tissues were detected with SuperPicTure™ Polymer DAB (Cat. No.87-8963). Images were taken at 40x (normal stomach) or 20x (lung carcinoma) magnification. Note membrane staining of normal stomach and cytoplasmic staining of lung carcinoma.



Western blot of mouse lung lysates labeled with rabbit anti-Claudin-18 (Cat. No. 700178).

Rabbit anti-Claudin-18 (2 µg/mL) was used to label Claudin-18 in mouse lung lysates (lane 1). Pre-incubation with the peptide used for immunization resulted in loss of signal (lane 2).

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