



Qty: 100µg/400 µL

Rabbit anti-Claudin-15

Catalog No. 38-9200

Lot No.

Rabbit anti-Claudin-15

FORM

This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.408

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the mouse Claudin-15 protein.

SPECIFICITY

This antibody reacts with the mouse, rat, and human Claudin-15 proteins. On Western blots, it identifies a single band at ~20 kDa.

REACTIVITY

Reactivity has been confirmed with mouse intestine (ileum and colon) homogenates, rat ileum homogenates, and human claudin-15-transfected *Xenopus* oocyte homogenates. Low levels of expression have also been observed in mouse kidney homogenates by Western blotting.

Sample	Immunohistochemistry (Frozen)	Immuno-Fluorescence	Western Blotting
Mouse	+++	+++	+++
Human	ND	ND	++
Rat	ND	ND	++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Immunohistochemistry (Frozen): 14.5 µg/mL

Immunofluorescence: 14.5 µg/mL

Western Blotting: 1-3 µg/mL

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI389200

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BACKGROUND

Tight junctions create circumferential seals around cells in epithelial tissues that are critical for maintaining cell-cell adhesion. The "barrier" function of tight junctions regulates the passage of ions, water, and various macromolecules through paracellular spaces, while the "fence" function maintains cell polarity. Tight junctions thus function as a fence to prevent intermixing of molecules in the apical membrane with those in the lateral membrane. Tight junctions are comprised of the membrane proteins occludin, claudins, and JAMs. Claudins are responsible for the formation of tight junction strands and are connected with the actin cytoskeleton by ZO-1.¹

Claudin-15 is expressed in endothelial cells in the mouse kidney.² Claudin-15 creates Na⁺-selective paracellular channels, and charge-reversing mutations on the first extracellular domain of Claudin-15 create Cl⁻-selective paracellular channels.³ Claudin-15 has a high level of expression in the mouse small and large intestine.

REFERENCES

1. Sawada N, et al. *Med Electron Microsc* 36(3):147-156, 2003.
2. Kiuchi-Saishin Y, et al. *J Am Soc Nephrol* 13:875-886, 2002.
3. Colegio OR, et al. *Am J Physiol Cell Physiol* 283:C142-7, 2002.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

Conjugate	ZyMAX[™] Goat x Rabbit IgG (H+L)	ZyMAX[™] Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy [™] 3	81-6115	81-6515
Cy [™] 5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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