



Qty: 100µg/400 µL

Rabbit anti-Claudin-8

Catalog No. 40-0700Z

Lot No.

## Rabbit anti-Claudin-8

### 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.424

### IMMUNOGEN

Synthetic peptide derived from the C-terminal region of mouse and rat Claudin-8.

### SPECIFICITY

This antibody reacts with mouse, rat, and dog Claudin-8. On Western blots, it identifies the target band at ~30 kDa.

### REACTIVITY

Reactivity has been confirmed with TCMK-1 mouse kidney, KNRK rat kidney, and MDCK dog kidney cell lysates by Western blotting, and with ethanol-fixed, frozen mouse colon tissue by immunohistochemistry / immunofluorescence.

Sample	Immunohistochemistry (froz)	Western Blotting	Immuno-fluorescence
Mouse	+++	+++	+++
Rat	ND	+++	ND
Dog	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(froz):** 2.7 µg/mL

**Western Blotting:** 1-3 µg/mL

**Immunofluorescence:** 2.7 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)

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI400700Z

(Rev 05/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

**BACKGROUND**

Claudin-8 is a tight junction protein expressed in several mouse distal nephron segments, suggesting that it may contribute to the paracellular barrier that protects transtubular Na<sup>+</sup>, K<sup>+</sup>, and H<sup>+</sup> gradients in the distal nephron.<sup>1</sup> Caludin-8 decreases paracellular permeability to cations when overexpressed in MDCK-II cells, suggesting that it may function as a paracellular cation barrier.<sup>2</sup> Claudin-8 is also found in the thin ascending limb of Henle, a segment of the nephron that is known to be leaky to Na<sup>+</sup>.<sup>3</sup>

Claudin-8 is expressed primarily in tight junctions along the entire aldosterone-sensitive distal nephron (ASDN) and in the late thin descending limb of Henle, consistent with its role as a paracellular cation barrier protein.<sup>4</sup> Claudin-8 is found in umbrella cell tight junctions in the bladder epithelium.<sup>5</sup> Expression of Claudin-8 has also been reported in the inner ear.<sup>6</sup>

**REFERENCES**

1. Kiuchi-Saishin Y, et al. *J Am Soc Nephrol* 13: 875-886, 2002.
2. Yu et al, 2003). Carlin, et al. *J Leukoc Biol* 45:29-34, 1989.
3. Imai M. *Am J Physiol* 232:F201-209, 1977.
4. Li W Y and Huey CL. *Am J Physiol Renal Physiol* 286:F1063-71, 2004.
5. Acharya P, et al. *Am J Physiol Renal Physiol* 287:F305-318, 2004.
6. Kitajiri SI, et al. *Hear Res* 187:25-34, 2004.

**RELATED PRODUCTS**

<b>Product</b>	<b>Conjugate</b>	<b>Cat. No.</b>
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

<b>Conjugate</b>	<b>ZyMAX™ Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX™ Goat x Mouse IgG (H+L)</b>
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

Zymed® and ZyMAX™ are trademarks of Zymed Laboratories Inc. Cy™ and Sepharose® are trademarks of Amersham Biosciences Ltd.

**For Research Use Only**

[www.invitrogen.com](http://www.invitrogen.com)

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: [techsupport@invitrogen.com](mailto:techsupport@invitrogen.com)

PI400700Z

(Rev 05/08) DCC-08-1089

**Important Licensing Information** - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, [www.invitrogen.com](http://www.invitrogen.com)). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.