



Qty: 100 µg/400 µL

Rabbit anti-Tricellulin (C-term)

Catalog No. 488400

Lot No.

## Rabbit anti-Tricellulin (C-term)

### 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.699

### IMMUNOGEN

Recombinant protein derived from the C-terminal region of the human Tricellulin protein (Accession# NP\_001033692, Q8N4S9), which is identical to rhesus monkey and chimpanzee sequences, and 89% homologous to rat and mouse, 88% homologous to bovine and canine, and 86% homologous to horse sequence.

### SPECIFICITY

This antibody is specific for the Tricellulin (MARVEL domain-containing protein 2) protein. On Western blots, it identifies the target band at ~64 kDa.

### REACTIVITY

Reactivity has been confirmed with human Caco-2, dog MDCK, mouse IMCD-3 cells and mouse kidney lysates by Western blotting and with mouse MTE7b cells by immunocytochemistry. Based on amino acid sequence homology, reactivity with rhesus monkey, chimpanzee, rat, bovine and horse is expected.

Sample	Western Blotting	Immuno-cytochemistry
Human	+++	ND
Mouse	++	+++
Canine	+++	ND
Rhesus monkey	ND	ND
Chimpanzee	ND	ND
Rat	ND	ND
Bovine	ND	ND
Horse	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 that listed below has not been determined. The following concentration range is the recommended starting point for this product.

**Western Blotting:** 1-3 µg/mL

**Immunocytochemistry:** 2-4 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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**BACKGROUND**

Tight junctions form an important barrier of paracellular transport in epithelial cells. Sealing of two adjacent cells at bicellular tight junctions (bTJ) is well described. The main structural components of bicellular tight junctions are claudins and occludin, all tetra membrane-spanning proteins. Less is known about the structure of tricellular tight junctions (tTJ), a point where three adjacent cells are in contact with each other. Tricellulin is the first protein identified that specifically concentrates in tricellular tight junctions.<sup>1</sup> This protein has four membrane spanning domains, similarly to claudins. Tricellulin expression is high in epithelium-derived tissues, such as small intestine, kidney and lung.<sup>1</sup> Functional evidence for the role of tricellulin in tight junction formation comes from siRNA studies, where suppression of its expression leads to compromised epithelial barrier and tight junction formation. Mutations in tricellulin can cause nonsyndromic deafness (DFNB49).<sup>2</sup> These mutations remove all or most of a conserved region in the cytosolic domain that binds to the cytosolic scaffolding protein ZO-1, indicating that interaction with other known tight junction proteins plays an important role for the function of tricellulin. An independent study in Pakistani families confirmed the role of tricellulin mutations for hearing impairment.<sup>3</sup>

**REFERENCES**

1. Ikenouchi J, et al. *J Cell Biol* 171(6):939-945, 2005.
2. Riazuddin S, et al. *Am J Hum Genet* 79(6):1040-1051, 2006.
3. Chishti MS, et al. *J Hum Genet* 53(2):101-105, 2008.

**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
ZyMAX™ Goat anti-rabbit IgG	Unconjugated	81-6100
ZyMAX™ Goat anti-mouse IgG	Unconjugated	81-6500

Secondary antibody conjugates.

<b>Conjugate</b>	<b>Goat anti-rabbit IgG (H+L)</b>	<b>Goat anti-mouse IgG (H+L)</b>	<b>Ex/Em*</b>	<b>Fluorescence similar to--</b>
Alexa Fluor® 488	A11008	A11001	495/519	FITC
Alexa Fluor® 555	A21428	A21422	555/565	Cy3
Alexa Fluor® 594	A11012	A11005	590/617	Texas Red
Alexa Fluor® 647	A21244	A21235	650/668	Cy5
HRP	81-6120	81-6520	NA**	NA
AP	81-6122	81-6522	NA	NA
Biotin	B2770	B2763	NA	NA

\*Excitation/emission (nm); \*\*Not applicable

For additional secondary antibody conjugates, visit [www.invitrogen.com/antibodies](http://www.invitrogen.com/antibodies)

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