



Qty: 100 µg/400 µL

Rabbit anti-Pannexin 1 (N-term)

Catalog No. 487900

Lot No.

## Rabbit anti-Pannexin 1 (N-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.695

### IMMUNOGEN

Synthetic peptide derived from the N-terminal region of the mouse Pannexin 1 protein (Accession# NP\_062355), which is identical to rat and human sequences.

### SPECIFICITY

This antibody is specific for the Pannexin 1 (Panx1, PX1, innexin) protein. On Western blots, it identifies the target band at ~45 kDa.

### REACTIVITY

Reactivity has been confirmed with Pannexin 1 transfected C6 cell lysates by Western blotting and with mouse hippocampus frozen sections by immunohistochemistry. Based on amino acid sequence homology, reactivity with human and rat is expected.

Sample	Western Blotting	Immuno-cytochemistry	Immuno-histochemistry
Human	ND	ND	ND
Mouse	+	+++	+++
Rat	ND	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.

**Western Blotting:** 1-3 µg/mL  
**Immunocytochemistry:** 2-4 µg/mL  
**Immunohistochemistry:** 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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(Rev 10/08) DCC-08-1089

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**BACKGROUND**

Pannexins constitute a new family of gap junction type proteins. Besides the connexin proteins, Pannexin 1 and 2 seem to be molecular components of neuronal gap junctions ("electrical synapses") that are thought to form connections between principal cells in the hippocampus.<sup>1</sup> Functional expression in paired *Xenopus* oocytes indicated that pannexins are capable of forming communicating junctions.<sup>2</sup> In addition to forming gap junction channels in paired oocytes, Pannexin 1 can also form a mechanosensitive and ATP-permeable channel in the nonjunctional plasma membrane.<sup>3</sup> The ATP-releasing Pannexin 1 hemichannels have proven to be important for cell-cell communication and signal processing.<sup>3,4,5</sup> Immunohistochemistry revealed postsynaptic localization of Pannexin 1 in rodent hippocampal and cortical principal neurons accumulating at postsynaptic densities. The asymmetric synaptic distribution of Pannexin 1 suggests that it may function in neurons as non-junctional channels (pannexons) at postsynaptic sites and comprises a novel component of the postsynaptic protein complex.<sup>6</sup>

**REFERENCES**

1. Bruzzone R, et al. *Proc Natl Acad Sci USA* 100(23):13644-13649, 2003.
2. Vanden Abeele F, et al. *J Cell Biol* 174(4):535-546, 2006.
3. Huang YJ, et al. *Proc Natl Acad Sci USA* 104(15):6436-6441, 2007.
4. Romanov RA, et al. *EMBO J* 26(3):657-667, 2007.
5. Thompson RJ, et al. *Science* 312(5775):924-927, 2006.
6. Zoidl G, et al. *Neuroscience* 146(1):9-16, 2007.

**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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