



Qty: 100 µg/400 µL

Rabbit anti-Connexin 29

Catalog No. 487700

Lot No.

Rabbit anti-Connexin 29

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.692

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the mouse Connexin 29 protein (Accession# NP_536698), which is 84% homologous to rat sequence.

SPECIFICITY

This antibody is specific for the Connexin 29 (GJE1, Cx29; CX30.2) protein. On Western blots, it identifies the target band at ~31 kDa and the presumptive dimer at ~54 kDa.

REACTIVITY

Reactivity has been confirmed with mouse sciatic nerve homogenate by Western blotting and with mouse sciatic nerve and cerebral cortex frozen sections by immunohistochemistry. Reactivity with rat is expected.

Sample	Western Blotting	Immuno-precipitation	Immuno-histochemistry
Human	ND	ND	ND
Mouse	+++	ND	+++
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
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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PI487700

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BACKGROUND

Cells in the central nervous system (CNS) communicate directly via gap junctions at close appositions between plasma membranes, thereby providing channels for movement of ions and small molecules from cell to cell.¹ Connexin 29 is a gap junction protein of 258 amino acids encoded by a novel single copy mouse gene that maps to distal mouse chromosome 5 and shows 75% sequence identity to a human counterpart.⁴ Connexin 29 was enriched in subcellular fractions of myelin, and immunofluorescence for Connexin 29 was localized to oligodendrocytes and myelinated fibers throughout the brain and spinal cord.^{2,3} Oligodendrocyte somata displayed minute Connexin 29-immunopositive puncta around their periphery and intracellularly. Immunofluorescence labeling for Connexin 29 in oligodendrocyte somata was intense at young ages and was dramatically shifted in localization primarily to myelinated fibers in mature CNS. Connexin 29 and Connexin 32 were minimally colocalized on oligodendrocytes somata and partly colocalized along myelinated fibers.³ The results suggest that Connexin 29 in mature CNS contributes minimally to gap junctional intercellular communication in oligodendrocyte cell bodies but rather is targeted to myelin, where it, with Connexin 32, may contribute to connexin-mediated communication between adjacent layers of uncompact myelin.³

REFERENCES

1. Nagy JI, et al. *Brain Res Brain Res Rev* 47(1-3):191-215, 2004.
2. Li X and Nagy JI, et al. *Eur J Neurosci* 16(5):795-806, 2002.
3. Nagy JI, et al. *J Comp Neurol* 464(3):356-370, 2003.
4. Sohl G, et al. *Biol Chem* 382(6):973-978, 2001.

RELATED PRODUCTS

Product	Conjugate	Cat. No.
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.

Conjugate	Goat anti-rabbit IgG (H+L)	Goat anti-mouse IgG (H+L)	Ex/Em*	Fluorescence similar to--
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

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