



Qty: 100µg/400µL

Rabbit anti-Connexin 47

For Research Use Only

Catalog No. 36-4700

Lot No.

Rabbit anti-Connexin 47

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.255

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the mouse Connexin 47 protein.

SPECIFICITY

This antibody reacts with the mouse Connexin 47 protein. On Western blots of mouse brain homogenates, it identified a single band at ~47 kDa.

REACTIVITY

Reactivity has been confirmed in Western blots with mouse thalamus, spinal cord, hypothalamus, cerebellum and whole brain lysates.

Sample	Western Blotting	IHC (frozen tissue)
Mouse	+++	++
Immunogen	N/A	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
IHC (frozen tissue): 2-5 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

Intercellular communication through gap junctions (connexins) plays an important role in a variety of cellular processes including homeostasis, morphogenesis, cell differentiation and growth control^{1,2,3}. In rodents, 15 connexin genes have been described^{4,9}. Specific cell types in the brain express specific types of connexins; expression patterns coincide with tissue compartmentalization and function. These compartments change during development⁵. Reduction or alteration in the levels or types of connexin expressed in a given cell type has been found to correlate with tumor progression and metastasis¹⁰.

The coding sequence of the mouse gap junction Cx47 has 49% homology with mouse Cx45; both are located on chromosome 11 in the mouse genome^{6,8}. Cx47 has been observed to express mainly in the gray matter of the central nervous system, specifically in several types of hippocampal, cortical, cerebellar and spinal cord neurons⁸.

Functional gap junctions are involved in tissue homeostasis of ions, metabolites and second messenger molecules¹¹. Between neuronal cells, these functions play a role in synchronizing oscillations of certain cell clusters and could impact burst thresholds of electrotonically coupled cells⁷. Cx47 induces strong electrical coupling that is sensitive to chemical uncouplers⁸. Cx47 appears to be a less restrictive channel than Cx36 and may show preference to larger metabolites or second messengers rather than the intercellular diffusion of inorganic ions that Cx36 preferentially allows⁸.

REFERENCES

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11. Willecke K, et al. *Novartis Found Symp* 219: 76-88, 1999.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Rabbit anti-Connexin36	CY44	51-6300
Rabbit anti-Connexin36	CYL5	51-6200
Rabbit anti-Connexin26	UM214	51-2800
Rabbit anti-Connexin29	ZMD.81	34-4200
Rabbit anti-Connexin30	Z-PP9	71-2200
Rabbit anti-Connexin32	ZMD.193	34-5700
Mouse anti-Connexin32	5F9A9	35-8900
Rabbit anti-Connexin43	Z-JB1	71-0700
Mouse anti-Connexin43	3D8A5	35-5000
Mouse anti-Connexin50	C6	33-4300
Mouse anti-Connexin36	1E5H5	37-4600
Connexin Antibody Sampler Pack	Various	90-0500

Protein A	Sepharose [®] 4B	10-1041
rec-Protein G	Sepharose [®] 4B	10-1241

*PAD: Polyclonal Antibody Designation

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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