Qty: 100 µg/400 µL

Rabbit anti-Connexin 37 (C-term)

Catalog No. 42-4400

Lot No.

Rabbit anti-Connexin 37 (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.565

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of the mouse, rat, golden and Chinese hamster, and predicted dog connexin 37 proteins, which differ from human and chimpanzee by two conservative amino acid changes

SPECIFICITY

This antibody is specific for the connexin 37 (Cx37, gap junction membrane channel protein α4) protein. On Western blots, it identifies the target band at ~34 kDa.

REACTIVITY

Reactivity has been confirmed with mouse lung homogenates by Western blotting and with blood vessels in frozen mouse heart tissue by immunohistochemistry. Based on amino acid sequence homology, reactivity with rat, hamster, dog, human, and chimpanzee is expected.

Sample	Western Blotting	Immunohistochemistry (frozen)
Mouse	+++	+++
Rat	ND	ND
Hamster	ND	ND
Dog	ND	ND
Human	ND	ND
Chimpanzee	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: 1-3 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)

BACKGROUND

Connexin 37 (Cx37) is a gap junction protein with expression limited to few cell types, predominantly in endothelial cells and in the lung.[1] Cx37 is found in the endothelium of the aorta, caudal and basilar arteries and also in smooth muscle cells of the trachea and pulmonary artery.[2] Vascular abnormalities were observed in mice lacking Cx37 and Cx40, particularly in the testis and small intestine.[3] Cx37 is found in ovary gap junctions between oocyte and granulose calls, and is essential for normal follicular growth.[3]

Cx37 mRNA is upregulated following sciatic nerve injury, and this correlates with subsequent thermal hyperalgesia, suggesting that gap junctions composed of Cx37 may contribute to hyperexcitability following peripheral nerve injury.[4] Cx37 may also play an important part in cardiovascular biology, as dynamic changes in the expression pattern of Cx37 were observed during arteriogenesis in dog heart, indicating that Cx37 is a marker for arteriogenesis.[5] Cx37 is also reduced upon hyperlipidemia in mice and these expression changes are reversed by the use of statins, the most widely used drugs to control elevated cholesterol levels.[6]

REFERENCES

1. Seul KH, Beyer EC. *Biochim Biophys Acta* 1492(2-3):499-504, 1999.
2. Nakamura K, et al. *Arch Histol Cytol* 62(1):27-37, 1999.
3. Simon AM, et al. *Nature* 385(6616):525-529, 1997.
4. Lin SH, et al. *Brain Res Mol Brain Res* 99(2):134-140, 2002.
5. Cai WJ, et al. *Mol Cell Biochem* 262(1-2):17-23, 2004.
6. Yeh HI, et al. *Arterioscler Thromb Vasc Biol* 23(8):1391-1397, 2003.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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

For Research Use Only

MZ060612