Qty: 100 µg/200 µl

Mouse anti-Connexin 50

Catalog No. 33-4300

Lot No.

Mouse anti-Connexin 50

FORM
This monoclonal antibody is purified from mouse ascites by size exclusion chromatography. The antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS (pH 7.4) containing 0.1% sodium azide.

CLONE: C6 **ISOTYPE:** IgM-κ

IMMUNOGEN
This antibody was prepared against urea/alkali stripped sheep lens membranes.

SPECIFICITY
This antibody is specific for Connexin 50. It does not cross react with other Connexin proteins. Anti-Connexin 50 recognizes an epitope in the cytoplasmic (carboxy) tail located between residues 290-440.

REACTIVITY
This antibody reacts with Connexin 50 from sheep, human, mouse, rat and probably other species. Clone C6 has been tested in a wide variety of tissues including lens, cornea, and heart valve. Reactivity with species not specifically mentioned here has not been evaluated.

USAGE
The dilutions listed below are good starting points, however, optimal dilutions should be determined by the investigator for each application.

ELISA:	0.1-1.0 µg/ml
Western Blotting:	1-5 µg/ml
Immunofluorescence	10-50 µg/ml
Immunoprecipitation:	5-10 µg

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long term storage. Avoid repeated freezing and thawing.

BACKGROUND[1-6]
Gap junctions are specialized structures formed between plasma membranes of adjacent cells that play important roles in coupling chemical and electrical activity in nearly all tissue types and early vertebrate embryos. Within gap junctions numerous proteinaceous gap junction channels, approximately 1.5 nm in diameter, provide an aqueous route for the free passage of inorganic ions and small molecules (<1200 daltons) between cell cytoplasms. These channels allow for the efficient propagation of electrical signals and the transmission of signals carried by small regulatory molecules such as cAMP.

Gap junction channels form from two opposing hemichannels, or connexons, on adjacent cells. Each connexon is comprised of a ring of six identical protein subunits, termed connexins. Connexin proteins themselves form a large multigene family. To date at least twelve highly homologous, but distinct connexin genes have been identified in vertebrates, each with its own distinctive, though sometimes overlapping, tissue distribution. Regions of sequence divergence, including the cytoplasmic tail, are thought to mediate connexin type-specific properties including phosphorylation, response to gating stimuli, and membrane turnover.

(cont'd)

Connexin 50 also known as α8 connexin, originally described as the lens fiber protein MP70, appears to be expressed only in the lens. Recent studies with Cx43[7] and Cx50[8] knockout mice demonstrate that unique functional properties of each protein is required for both maintenance of lens transparency and normal eye growth. It is not clear, however, whether loss of transparency results from improper cell-cell communication or from the improper organization of lens membrane and cytoplasmic proteins.

REFERENCES

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3. White TW, et al., Genetic diseases and gene knockouts reveal diverse connexin functions. Annu Rev Physiol. 61:283-310 (1999).
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RELATED PRODUCTS

Product	*Clone/PAD**	*Cat. No.*	
Ms x Connexin 26	CX-12H10	13-8100	
Rb x Connexin 26 (x-reacts with Cx30)	Z-Z8	71-0500	→**Super-sensitive for Westerns!**
Rb x Connexin 26 (specific)	UM214	71-5800	
Rb x Connexin 30	Z-PP9	71-2200	
Ms x Connexin 32	CX-2C2	13-8200	
Rb x Connexin 32	Z-AA6	71-0600	
Ms x Connexin 43	CX-1B1	13-8300	
Rb x Connexin 43	Z-JB1	71-0700	
Connexin Sampler Pack (26,32,43)	3 Abs + Controls	90-0500	

Product	*Conjugate*	*Cat. No.*
Goat x Rabbit IgG (H+L) (ZyMAX™ Grade)	Purified	81-6100
	FITC	81-6111
	TRITC	81-6114
	Cy™3	81-6115
	Cy™5	81-6116
	HRP	81-6120
	AP	81-6122
	Biotin	81-6140
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD- polyclonal antibody designation

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