



Qty: 50 µg/200 µl

Rabbit anti-Connexin 26

Catalog No. 51-2800

Lot No. See product label

Rabbit anti-Connexin 26

FORM

This polyclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.25 mg/ml in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. The antibody is epitope affinity-purified from rabbit antiserum.

POLYCLONAL ANTIBODY DESIGNATION (PAD): UM214

IMMUNOGEN

A 13 amino acid synthetic peptide derived from the C-terminus of the mouse Connexin 26 protein. This mouse sequence differs from the rat sequence by a single amino acid and from the human sequence by two (non-consecutive) amino acids.

SPECIFICITY

This antibody can be used to specifically detect the Connexin 26 protein. No cross-reactivity with the closely related Connexin 30 protein has been observed.

REACTIVITY

Species reactivity includes mouse and rat. Based on sequence homology, human reactivity is likely but has not been confirmed. Antibody reactivity was confirmed by Western blotting using lysates derived from mouse liver, rat liver and rat brain.

Sample	ELISA	Immuno-histochemistry (frozen)	Western Blotting*
Mouse		nt	+
Rat		+	+
Immunogen	+		

* tested with mouse liver, rat liver, rat brain; nt=not tested

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.

ELISA: 0.1-1.0 µg/ml
Immunohistochemistry: 10-20 µg/ml
Western Blotting: 1-2 µg/ml

Reactivity of this antibody in applications other than those named here has not been evaluated.

Note: For applications where cross-reactivity with Cx30 is inconsequential, consider Cat. No. 71-0500. This antibody exhibits superior sensitivity for Cx26 in blotting and probably other applications.

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)

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI512800

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BACKGROUND

Intercellular communication through gap junctions plays an important role in a variety of cellular processes including homeostasis, morphogenesis, cell differentiation, and growth control.⁽¹⁻⁴⁾ Gap junctions are transmembrane channels that serve to directly link neighboring cells by mediating the exchange of low-molecular weight (<1200 Da) metabolites, ions, and second messengers. Gap junctions are formed by the interaction of hemichannels (connexons) on adjacent cells. The connexon itself is composed of a hexameric assembly of connexin proteins. Connexins are highly homologous proteins encoded by a multigene family. The connexins exhibit similar structural features, which include a cytoplasmic amino terminal region, four transmembrane domains, two extracellular loops, and a carboxy-terminal cytoplasmic tail of varying length. Comparison of the amino acid sequences of the various connexin family members indicate that the two areas of greatest divergence amongst the connexin family members are the intracellular loop connecting the second and third transmembrane segments and the carboxy-terminal tail.^(1,2) These domains are, therefore, thought to mediate connexin-type specific properties including phosphorylation, responses to gating stimuli, as well as assembly and membrane turnover. Modulation of gap junction communication can be achieved by multiple mechanisms and can occur very rapidly or over a period of several hours. These mechanisms include alterations in transcription, translation, stability, posttranslational processing (especially phosphorylation), gating, and insertion or removal from the plasma membrane. Interestingly, reduction or alterations in the levels or types of connexin expressed in a given cell type has been found to correlate with tumor progression and metastasis⁽⁵⁾.

Connexin 30 (Cx-30) is a recently identified member of the connexin gene family, isolated by screening a mouse genomic library with a rat Cx26 probe.⁽⁶⁾ Cx30 is closely related to Cx26 (77% amino acid sequence identity),^(6,7) but the two show distinct tissue expression patterns: Cx30 is highly expressed in adult skin and brain while but not in embryonic and fetal brain.^(6,7) On the other hand, Cx26 is expressed highly in prenatal brain, decreasing after birth.

REFERENCES

1. Kumar, M. and Gilula, M.B., *Cell* 84:381-388 (1996).
2. Saez, J.C., et al; *In Advances in Second Messenger and Phosphoprotein Research*; eds S., Shenolikar and A., Narin. Raven Press, New York (1993).
3. Bennet, M.V.L., et al; *Neuron* 6:305-320 (1990).
4. Kuraoka, A., et al; *J. Histochem. and Cytochem.* 41:971-980 (1993).
5. Wilgenbus, KK., et al; *Int. J. Cancer* 51:522-529 (1992).
6. Dahl, E. et al., *J. Biol. Chem.* 271:17903-17910 (1996).
7. Nagy, J.J., et al., *Neuroscience* 78:533-548 (1997).

RELATED PRODUCTS

Product	PAD*clone	Cat. No.
Ms x Connexin 26	CX-12H10	13-8100
Rb x Connexin 26	Z-Z8	71-0500
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
Ms x Connexin 50	C6	33-4300
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

ZyMed® and ZyMAX™ are trademarks of Zymed Laboratories Inc. Cy™ is a trademark of Amersham Life Sciences, Inc. Sepharose® is a registered trademark of Pharmacia LKB.

For Research Use Only

SS000922

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI512800

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.