ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Connexin 32 (Cx32)/Gap Junction Beta-1 Protein (CXB-1)/Gap Junction 28 kDa Liver Protein

Cat. CX32C13-M	Mouse Monoclonal Anti Rat Cx32 ascites #3	**SIZE**: 100 ul
Cat. CX32C13-P	Rat Connexin Cx32A Control peptide #3	**SIZE**: 100 ug

Gap junctions are composed of transmembrane channels that link the cytoplasm of neighboring cells. They differ from other membrane channels since they exist between two cells. Gap junctions are relatively non-specific and allow passive diffusion of small molecules up to 1000 Dalton. The junctions exist in almost all vertebrate and non-vertebrates cells. It is believed that gap junction play an important for intercellular communications and affect growth and differentiation of cells. Gap junctional channel is composed of a hemichannel (connexon) in the cell membrane of one cell joined in mirror symmetry with a connexon in the opposing cell. Each connexon is an oligomer of six protein subunits that define the axial aqueous pore. Molecular cloning studies have identified a family of at least 12 highly related Connexins that are designated according to mol. wt, **Cx26-50**. Hydropathy analyses of Cx sequences predicts 4 transmembrane ™, 2 extracellular (EC), and 3 cytoplasmic (CP) domains. The EC, TM, and N-terminal CP domains are well conserved among family members, while Central and C-terminal domains are highly variable in both sequence and size. The N and C-termini are predicted to be cytoplasmic.

Source of Antigen, Antibodies

Antigen	18aa peptide of Rat CX32 ; **Designated (CX32C13-P or control peptide).** Epitope location~ C-terminal, Cytoplasmic domain
Ab Host/type	Mouse, monoclonal, unpurified ascites **cat #CX32C13-M,** isotype IgG1
2-ab	**Goat Anti-mouse IgG-HRP conjugate** Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG

100 ug/100ul solution lyophilized powder

Supplied in **Buffer**: PBS+0.1% BSA

Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,

Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

Long-term: at –20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure using Chemiluminescence technique). See refs in 2

ELISA (1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: We recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissues. See refs in 2

Specificity & Cross-reactivity

Rat Cx32C13-P immunogenic peptide sequences is the same in mouse and human. Antibody crossreactivity in various other species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: (1) Kumar, Nm and Giula, NB (1996) Cell 84, 381-388; White , WT et al (1995) Kidney Intl. 48, 1148-1157; Evans, HW (1994) Biochem. Soc. Tr. 788-792; Byer, E et al (1990) J. membrane Biol. 116, 187-194; (2) Zhang, J-T. and Nicholson, BJ (194) J. Membrane Biol. 139, 15-29 (3) Nishi M et al (1991) Dev.
Biol. 146, 117-130; Kumar, NM (1986) J Cell Biol. 103, 767-776; Hennemann, H et al (1992) J. Biol. Chem. 267, 17225-17233

2. Citations of for ADI Antibodies (see updates at the web site)

Fischer R, 2005, Gastroenterology, 128, 433-448, WB, IHC,

*This product is for in vitro research use only.

Related material available from ADI

Anti- Cx26-Cx50

CX32C13-M-P 71217A

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