ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Connexin 50 (Cx50)/Gap Junction alpha-8 Protein (CXA-8)/Lens Fiber Protein MP70 Antibodies

Cat. CX50-S	Rabbit Anti-Mouse Cx50 Antiserum	**SIZE**: 100 ul
Cat. CX50-A	Rabbit Anti- Mouse Cx50, Ig G (affinity pure)	**SIZE**: 100 ug
Cat. CX50-P	Mouse Connexin Cx50 Control peptide	**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	13-aa peptide from Mouse CX50 **(1)**; **Designation (# CX50-P, control/blocking peptide**) conjugated to KLH; **Epitope location**~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**CX50**-S) and IgG, purified over antigen-agarose (Cat # **CX50**-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied 0.05% azide, **Reconstitute** powder in 100 ul PBS

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 (1:1K-5K for neat serum and 1-10 µg/ml for affinity pure using Chemiluminescence technique). See published papers below.

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

Histochemistry & Immunofluorescence: we recommend the use of affinity purified antibody at 2-10 µg/ml (2). Adherent cells can be fixed in 50% methanol-50% acetone or 1% paraformaldehyde (3). See published papers below.

Specificity & Cross-reactivity

Mouse Cx50 immunogenic peptide sequence is specific for Cx50, It shows 100% sequence homology with rat Cx50 and no significant homology is seen with other Connexins. The immunogenic peptide sequence used for mouse Cx50 has no significant homology with human Cx50. 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; Paul DL et al (1991) J Cell Biol. 115, 1077-1089; White TW et al (1992) Mol. Cell. Biol. 3, 711-720

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

Maddala R, 2007, "Differentiation, OnlineEarly Articles. Published article online: 25-Apr-2007", , IHC

*This product is for in vitro research use only.

Related material available from ADI

Anti- Cx26-Cx50

CX50-S-A-P 71217A

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