ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Connexin45 (Cx45)/Gap Junction Alpha-6 Protein (CxA-6) Antibodies

Cat. CX45-S	Rabbit Anti-Mouse Cx45 Antiserum # 1	**SIZE**: 100 ul
Cat. CX45-A	Rabbit Anti- Mouse CX45 IgG # 1 (aff pure)	**SIZE**: 100 ug
Cat. CX45-P	Mouse Connexin CX45 Control peptide # 1	**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	14aa peptide of Mouse CX45 ; **Designated (CX45-P or control peptide /blocking peptide**) conjugated to KLH; epitope location ~ N-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**CX45**-S) and IgG, purified over antigen-agarose (Cat # **CX45**-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 ECL). 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 2-10 µg/ml. See refs in 2.

Specificity & Cross-reactivity

Mouse Cx45-P peptide sequence is 100% conserved in chicken, dog, rat, human, hamster and g. pig Cx45. It has no significant homology with other Connexins. Antibody crossreactivity with Cx45 in various 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 (1996) Cell 84, 381-388; White, WT (1995) Kidney Intl. 48, 1148-1157; Evans, HW (1994) Biochem. Soc. Tr. 788; Byer, E (1990) J. Membrane Biol. 116, 187; **(2).** Henneman, H (1992) Eur. J. Cell Biol. 57, 51; Kanter, HL (1992) Cir. Res. 70, 438;

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

Tai M-H, 2003, Pancreas. 26(1):e18-e26,, WB, IHC
Bason C, 2003, The Lancet, 362, 9400, 1971-1977, WB,
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Van der Velden, 2000, Cardiovasc. Res. 46, 476-486, WB,, IHC,
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*This product is for in vitro research use only.

Related material available from ADI
Anti- Cx26-Cx50

CX45-S-A-P 71217A

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