ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Connexin 43 (Cx43A11)/Gap Junction Alpha-1 Protein (CXA-1) Antibodies

Cat. CX43A11-S	Rabbit Anti-Mouse Cx43A11 Antiserum #1	**SIZE**: 100 ul
Cat. CX43A11-A	Rabbit Anti- Mouse Cx43A11 Ig G # 1(aff pure)	**SIZE**: 100 ug
Cat. CX43A11-P	Mouse Connexin Cx43A11 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**.

Source of Antigen, Antibodies

Antigen	19aa peptide of Mouse CX43 ; **Designated (CX43A11-P or control peptide).** Epitope location~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat # CX43A11-S) Aff pure IgG1 (**cat #CX43A11-A**) purified over antigen-agarose column
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (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.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

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

Histochemistry & Immunofluorescence: Not Tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissues.

Specificity & Cross-reactivity

Mouse Cx43A11-P immunogenic peptide sequence is specific for Cx43 and no significant homology is seen with other Connexin. The mouse Cx43 peptide sequence shows homology of 100% (rat, bovine), 84% in chicken, and human Cx43. 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) Haefliger, JA et al (1992) JBC 267,
2057-2064; ; Reed KE et al (1993) J Clin. Invest. 91, 997-1004; Wilecke K et al (1991) 114, 1049-1057; Byer EC et al (1985) JCB 105, 2621; Nicholson BJ et al (1985) JBC 260, 6514; John SA et al (1991) BBRC 178, 1312; Fishman GI et al (1990) JCB 111, 589-598.

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

Wiszniewski L, 2007, Differentiation, 75, Issue 5: 382-392, WB,
Liao Y, 2007, Arterioscler. Thromb. Vasc. Biol., 27: 1037 , IHC
Isakson BE, 2006, AJP Heart Circ Physiol, 290: H1199 , IHC,
Sato T, 2002, Diabetes 51: 1565-1571, WB,
Aase karin, 2001, Circulation 104: 358-364,, , IHC,
Gutstein DE, 2001, Circ. Res. 88: 333-339, WB,, IHC,
Theiss C, 2006, Experimental Cell Research, 313, 38-52, WB, IHC
Delay RJ, 2003, Chem Senses, 28: 807 - 815, WB,
Galindo EEH, 2003, Invest. Ophthalmol. Vis. Sci., 44: 2959, IHC,

*This product is for in vitro research use only.

Related material available from ADI

Anti- Cx26 - Cx50

CX43A11-S-A-P 71217A

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