ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Connexin 40 (Cx40)/Gap Junction alpha-5 Protein (CXA-5) Antibodies

Cat # CX40-S	Rabbit Anti-Mouse Cx40 Antiserum #1	**SIZE**: 100 ul
Cat # CX40-A	Rabbit Anti- Mouse Cx40 IgG #1, (aff pure)	**SIZE**: 100 ug
Cat # CX40-P	Mouse Connexin Cx40 Control/blocking 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**.

Source of Antigen, Antibodies

Antigen	19aa peptide of Mouse CX40 ; **Designated (CX40-P or control peptide)** conjugated to KLH; Epitope location~ C-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat # CX40-S) Aff pure IgG (**cat #CX40-A**) purified over antigen-agarose column
2-ab	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)
□ 100 ul □ Solution □ Lyophilized powder
Supplied 0.1% azide, **Reconstitute** powder in 100 ul PBS

Affinity pure IgG
□ 100 ug/100 ul □ Solution □ Lyophilized powder
Supplied in **Buffer**: PBS + 0.1% BSA
Reconstitute powder in PBS at 0.5 mg/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 **-20°C** and powder at **4°C or -20°C..**
Long-term: at **-20°C** or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.
Stability: 6-12 months at **-20°C** or below.

Recommended Usage

Western Blotting We recommend the use of (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique). (not tested) 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 (not tested)

Specificity & Cross-reactivity

Mouse Cx40 immunogenic peptide sequence is specific for Cx40 and no significant homology is seen with other Connexin. The Cx40 peptide is conserved in rat/human (100%), chicken Cx42 (77%), human CX50 (87%), rat CX50 (81%) and Sheep Cx49 (87%). 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 see detailed protocol at the web site).

General References: (1) Kumar, Nm (1996) Cell 84, 381; White , WT (1995) Kidney Intl. 48, 1148; Evans, HW (1994) Biochem. Soc. Tr. 788-792; Byer, E (1990) J. membrane, Biol. 116, 187 (2) Haefliger, JA (1992) JBC 267, 2057;

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

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*This product is for in vitro research use only.

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