

Product Specification Sheet

**Connexin 37 (Cx37)/Gap Junction Alpha-4 Protein (CXA4) Antibodies**

<b>Cat.</b> CX37A11-S	Rabbit Anti-Mouse Cx37 Antiserum # 1	<b>SIZE:</b> 100 ul
<b>Cat.</b> CX37A11-A	Rabbit Anti Mouse Cx37A IgG # 1 (aff pure)	<b>SIZE:</b> 100 ug
<b>Cat.</b> CX37A11-P	Mouse Connexin Cx37 Control/blocking peptide # 1	<b>SIZE:</b> 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. 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**

<b>Antigen</b>	16aa peptide of Mouse CX37 (gene accession # P28235 CXA4) ; <b>Designated (CX37A11-P or control or blocking peptide)</b> conjugated to KLH; <b>Epitope location</b> ~ C-terminal, Cytoplasmic domain
<b>Ab Host/type</b>	Rabbit, Polyclonal unpurified antiserum (# <b>CX37A11-S</b> ) and IgG, purified over antigen-agarose (Cat # <b>CX37A11-A</b> )
<b>2-Ab</b>	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
<b>-ve control</b>	# 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 in Buffer: 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 -200C 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). (refs 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**

Mouse Cx37A immunogenic peptide sequence is specific for Cx37 and no significant homology is seen with other Connexin. It shows 94%, 93% and 87% sequence homology with canine, rat and human Cx37, respectively. The Mouse Cx37A11-P peptide sequence also shows 68% homology with Xenopus Cx41 protein. 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; White , WT (1995) Kidney Intl. 48, 1148; Evans, HW (1994) Biochem. Soc. Tr. 788; Byer, E (1990) J. membrane Biol. 116, 187-194

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

Wiszniewski L, 2007, Differentiation, 75, Issue 5: 382-392, WB,  
Looft-Wilson RC, 2004, J Appl Physiol, 97: 1152 - 1158, , IHC  
Earley S, 2004, Am J Physiol Heart Circ Physiol, 287: 2677 - 2686, , IHC,  
Simon AM, 2006, Cell Communication & Adhesion, 13 , p61-77, WB, IHC,  
Laux-Fenton W, 2003, Cornea. 22(5):457-464,, , IHC  
Teilmann SC, 2005, Molecular Cellular Endocrinol. 234, 27-35, , IHC/IF  
Looft Wilson RC, 2004, Microcirculation, . 11 p397-408, , IHC  
Cepni I, 2007, Fertility and Sterility, In Press, Wiszniewski L, 2007, Differentiation, 75, Issue 5: 382-392, WB,  
Ebong EE, 2006, Am J Physiol Heart Circ Physiol, 290: H2015 - H2023., , IF  
Gustafsson FA, 2001, Histochem.Cell Biol., 115, 479-487, , IHC,  
Gershon E, 2007, Developmental Biology, In Press., , IHC,  
Rummary NM, 2002, Arterioscler. Thromb. Vasc. Biol. 22, 1427, WB,, IHC,  
Nawate S, 2005, Brit. J. Pharmacol. 144, 178-189, WB,  
Fischer R, 2005, Gastroenterology, 128, 433-448, WB, IHC,  
Simon AM, 2003, J. Cell Sci., 116: 2223 - 2236., WB, IHC,  
Rummary NM, 2002, "Clin. Exp. Pharmacol. Physiology 29 7 620", , IHC,  
Chaytor AT, 2005, Brit. J of Pharmacol., 144 , p108-114,, , IF  
Nemer G, 2002, Development 129, 4045-4055, , IF  
Hill CE, 2002, Clin. Exp. Pharmacol. & Physiology. 29:620-625, , IHC  
Wang H, 2002, Am. J. Obstetrics & Gynecology. 187(2):370-374., , IHC,  
Chaytor AT, 2005, Brit. J of Pharmacol., 144 p108-114,, , IF  
Sandow SL, 2003, Cardiovas..Res., 60, 643-653, ,  
Martin PEM, 2005, Br J Pharmacol.144(5):617-27., WB, IHC  
Li A-F, 2003, Invest. Ophthalmol. Vis. Sci., 44: 5376 - 5382, WB,  
Kansui Y, 2004, Am J Physiol Heart Circ Physiol, 287, H216-224, , IHC  
Dai G, 2004, Proc. Natl. Acad. Sci., 101: 14871 - 14876, , IHC  
Zhang Q, 2006, AJP Reg. Integrative Comp Physiol, 291: R1688, IF  
\*This product is for in vitro research use only.

**Anti- Cx26 - Cx50**  
**CX37A11-S-A-P 70605A**

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