

Product Specification Sheet

**Connexin 33 (Cx33)/Gap Junction alpha-7 Protein (CX $\alpha$ -7) Antibodies**

<b>Cat.</b> CX33-S	Rabbit Anti-Rat Cx33 Antiserum	<b>SIZE:</b> 100 ul
<b>Cat.</b> CX33-A	Rabbit Anti- Rat Cx33 Ig G (affinity pure)	<b>SIZE:</b> 100 ug
<b>Cat.</b> CX33-P	Rat Connexin Cx33 Control peptide	<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. 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 <sup>TM</sup>, 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**

<b>Antigen</b>	17aa peptide of Rat CX33 ; <b>Designated (CX33-P or control peptide or control peptide)</b> . Epitope location~ C-terminal, Cytoplasmic domain
<b>Ab Host/type</b>	Rabbit, polyclonal Unpurified antiserum (cat #CX33-S) Aff pure IgG1 (cat #CX33-A) purified over antigen-agarose column
<b>2-ab</b>	<b>Goat Anti-rabbit IgG-HRP</b> cat # 20320 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</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 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 ug/ml for affinity pure using Chemiluminescence technique). 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.

**Specificity & Cross-reactivity**

Rat Cx33 immunogenic peptide sequence is specific for Cx33 and no significant homology is seen with other Connexin. Sequence homology of rat Cx33 peptide with other species Cx33 is not known. 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

see updates at the web site)

**2. Citations of for ADI Antibodies (**

Fischer R, 2005, Gastroenterology, 128, 433-448, WB, IHC, Laux-Fenton W, 2003, Cornea. 22(5):457-464,, IHC

\*This product is for in vitro research use only.

**Related material available from ADI**

**Anti- Cx26 - Cx50**

CX33-S-A-P

71217A

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