ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Chloride Channel 7 (CLC-7 or CLCN7) Antibodies

Cat. # CLC72-P	Human CLC-7 Control/blocking Peptide # 2	**SIZE**: 100 ug
Cat. # CLC72-S	Rabbit Anti-Human CLC-7 antiserum # 2	**SIZE**: 100 ul
Cat. # CLC72-A	Rabbit Anti-Human CLC-7 IgG # 2 (aff pure)	**SIZE**: 100 ug

Chloride is a critical component of all living cells. Voltage-gated chloride channels regulate cellular traffic of chloride ion. The chloride channels (CIC or CLC) performs several functions including the regulation of cell volume, membrane potential stabilization, signal transduction, and transepithelial transport. Mutations in CIC genes have been linked with several human diseases including myotonias (Thomsen's disease), cystic fibrosis, Bartters syndrome type III, Dent's disease, and X-linked recessive nephrolithiasis. In mammals, CLC proteins form a superfamily of at least 9 different genes (CLC1-7 also known as CLCN1-7 and CLK1-2 or CLCKa and CLCKb). Additional forms of these proteins are obtained by alternative splicing. All CLC proteins (~700-1000 aa) are predicted to contain 10 (possibly 12) transmembrane domains. Except CLC-1 and CLC-K1/K2 that are specific for kidney, most other CLC are widely distributed in various tissues.

Rat **CLC-7** is 802 aa membrane protein (mouse 803 aa, human 805 aa) (1). CLC-7 has a calculated mol. Wt of approx. 90 kDa. CLC-7 is ~45% identical with CLC-6. CLC-7 is expressed in brain, tested, muscle and kidney (1).

Source of Antigen and Antibodies

Antigen	17-aa peptide from Human CLC7 **(1)**; **Designation (#CLC72-P, control/blocking peptide**) conjugated to KLH; **epitope location** ~ N-terminal, Cytoplasmic domain
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (**#CLC72**-S) and IgG, purified over antigen-agarose (Cat # **CLC72**-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 ug/ml for affinity pure antibody using ECL technique). (see published refs using this antibody in 2).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: We recommend the use of affinity purified antibody at 1-20 ug/ml in paraformaldehyde fixed sections of tissues. (see published refs using this antibody in 2).

Specificity & Cross-reactivity

The human CLC72-P control peptide is 93% conserved in mouse/rat CLC-7. No significant sequence homology is detected with other CLCs or other proteins. Antibody crossreactivity 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). Brandt S et al (1995) FEBS Lett. 377, 15-20; Konark U (1998) Gene accession #AF060399; Eggermont J et al (1998) BBA 1397, 156-160; (2) Kornak U et al (2001) Cell 104, 205-215

2. Citations for ADI Antibodies (see updates at the web site)
Auzanneau C 2003 J. Biol. Chem. 278, 19230-19236 WB IF

*This product is for In vitro research use only.

Related material available from ADI
Antibodies CLC1-7 and CLC-K1; KCC1-3; AQP-9
CLC72-S-A-P 71218A

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