# CLIC2 (L-13): sc-50907



The Power to Question

#### **BACKGROUND**

Chloride channels (CLCs) regulate cellular traffic of chloride ions, a critical component of all living cells. CLCs are involved in membrane potential stabilization, signal transduction, cell volume regulation and organic solute transport. The putative 247 amino acid protein chloride intracellular channel 2 (CLIC2), also designated XAP121, shares 60% identity with the CLIC1 protein and demonstrates expression in only fetal liver and adult skeletal muscle tissues. The CLIC2 gene maps to chromosome Xq28 and contains 6 exons. Because a direct association exists between a number of human chloride channel genes and a range of hereditary diseases, CLIC2 is a potential candidate for one of the many diseases linked to Xq28. The hereditary form of incontinentia pigmenti (IP2), for example, is a rare disorder characterized by abnormalities of the tissues and organs derived from the ectoderm and neuroectoderm that has been linked to Xq28.

#### **REFERENCES**

- Heiss, N.S. and Poustka, A. 1997. Genomic structure of a novel chloride channel gene, CLIC2, in Xq28. Genomics 45: 224-228.
- 2. Rogner, U.C., Heiss, N.S., Kioschis, P., Wiemann, S., Korn, B. and Poustka, A. 1997. Transcriptional analysis of the candidate region for incontinentia pigmenti (IP2) in Xq28. Genome Res. 6: 922-934.
- Berryman, M. and Bretscher, A. 2000. Identification of a novel member of the chloride intracellular channel gene family (CLIC5) that associates with the Actin cytoskeleton of placental microvilli. Mol. Biol. Cell 11: 1509-1521.
- Rønnov-Jessen, L., Villadsen, R., Edwards, J.C. and Petersen, O.W. 2002. Differential expression of a chloride intracellular channel gene, CLIC4, in transforming growth factor-β1-mediated conversion of fibroblasts to myofibroblasts. Am. J. Pathol. 161: 471-480.
- 5. Fan, L., Yu, W. and Zhu, X. 2003. Interaction of Sedlin with chloride intracellular channel proteins. FEBS Lett. 540: 77-80.
- Board, P.G., Coggan, M., Watson, S., Gage, P.W. and Dulhunty, A.F. 2004. CLIC2 modulates cardiac ryanodine receptor Ca<sup>2+</sup> release channels. Int. J. Biochem. Cell Biol. 36: 1599-1612.
- Dulhunty, A.F., Pouliquin, P., Coggan, M., Gage, P.W. and Board, P.G. 2005.
   A recently identified member of the glutathione transferase structural family modifies cardiac RyR-2 substate activity, coupled gating and activation by Ca<sup>2+</sup> and ATP. Biochem. J. 390: 333-343.

## **CHROMOSOMAL LOCATION**

Genetic locus: CLIC2 (human) mapping to Xq28.

#### **SOURCE**

CLIC2 (L-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CLIC2 of human origin.

#### **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-50907 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

CLIC2 (L-13) is recommended for detection of CLIC2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CLIC2 (L-13) is also recommended for detection of CLIC2 in additional species, including equine, canine, porcine and avian.

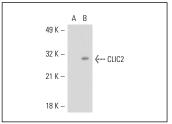
Suitable for use as control antibody for CLIC2 siRNA (h): sc-60402, CLIC2 siRNA (m): sc-60403, CLIC2 shRNA Plasmid (h): sc-60402-SH, CLIC2 shRNA Plasmid (m): sc-60403-SH, CLIC2 shRNA (h) Lentiviral Particles: sc-60402-V and CLIC2 shRNA (m) Lentiviral Particles: sc-60403-V.

Molecular Weight of CLIC2: 28 kDa.

### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **DATA**



CLIC2 (L-13): sc-50907. Western blot analysis of CLIC2 expression in non-transfected: sc-110760 (**A**) and CLIC2 transfected (**B**) 293T whole cell lysates.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.