

CLIC5 (h): 293T Lysate: sc-173628

BACKGROUND

Chloride intracellular channel 5 (CLIC5), is a member of the highly conserved family of chloride ion channels that function in both soluble and integral membrane forms. Chloride channels regulate cellular traffic of chloride ions, a critical component of all living cells. They are involved in membrane potential stabilization, signal transduction, cell volume regulation and organic solute transport. CLIC5 associates with Actin-based cytoskeletal structures and may be involved in their assembly and maintenance. In addition, CLIC5 may also play an important role in inner ear function localizing to the stereocilia and possibly associating with Radixin. Two CLIC5 isoforms exist and they are referred to as CLIC5A and CLIC5B. The two isoforms share an identical C-terminus but have distinct N-terminal sequences. CLIC5B is the human ortholog of bovine p64 and avian p62. It binds AKAP350 and localizes to the Golgi apparatus.

REFERENCES

1. Edwards, J.C. 1999. A novel p64-related Cl⁻ channel: subcellular distribution and nephron segment-specific expression. *Am. J. Physiol.* 276: F398-F408.
2. 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.
3. Ashley, R.H. 2003. Challenging accepted ion channel biology: p64 and the CLIC family of putative intracellular anion channel proteins (Review). *Mol. Membr. Biol.* 20: 1-11.
4. Friedli, M., et al. 2003. Identification of a novel member of the CLIC family, CLIC6, mapping to 21q22.12. *Gene* 320: 31-40.
5. Bohman, S., et al. 2005. Proteomic analysis of vascular endothelial growth factor-induced endothelial cell differentiation reveals a role for chloride intracellular channel 4 (CLIC4) in tubular morphogenesis. *J. Biol. Chem.* 280: 42397-42404.
6. Gagnon, L.H., et al. 2006. The chloride intracellular channel protein CLIC5 is expressed at high levels in hair cell stereocilia and is essential for normal inner ear function. *J. Neurosci.* 26: 10188-10198.
7. Suh, K.S., et al. 2007. Reciprocal modifications of CLIC4 in tumor epithelium and stroma mark malignant progression of multiple human cancers. *Clin. Cancer Res.* 13: 121-131.
8. Singh, H., et al. 2007. Functional reconstitution of mammalian "chloride intracellular channels" CLIC1, CLIC4 and CLIC5 reveals differential regulation by cytoskeletal Actin. *FEBS J.* 274: 6306-6316.
9. Suh, K.S., et al. 2007. CLIC4 mediates and is required for Ca²⁺-induced keratinocyte differentiation. *J. Cell Sci.* 120: 2631-2640.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: CLIC5 (human) mapping to 6p21.1.

PRODUCT

CLIC5 (h): 293T Lysate represents a lysate of human CLIC5 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

CLIC5 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CLIC5 antibodies. Recommended use: 10-20 µl per lane.

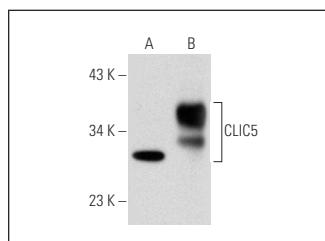
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CLIC4/5/6 (A-11): sc-271863 is recommended as a positive control antibody for Western Blot analysis of enhanced human CLIC5 expression in CLIC5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™
Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



CLIC4/5/6 (A-11): sc-271863. Western blot analysis of CLIC5 expression in non-transfected: sc-117752 (A) and human CLIC5 transfected: sc-173628 (B) 293T whole cell lysates.

RESEARCH USE

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