SANTA CRUZ BIOTECHNOLOGY, INC.

CLIC3 (405): sc-81872

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

CLIC3 (chloride intracellular channel protein 3) is a member of the highly conserved family of chloride ion channels (CLICs) 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. CLIC3 is found in a variety of tissues but is highly expressed in placenta, brain and heart. CLIC3 predominantly localizes to the nucleus. It stimulates chloride ion channel activity when expressed in cells. In addition, CLIC3 interacts with ERK 7 and may play a role in the regulation of cell proliferation. CLIC3 has a short hydrophobic domain, suggesting that it must multimerize or associate with other proteins if it functions in a membrane channel. Another possibility is that CLIC3 acts as a channel regulator.

REFERENCES

1. Qian, Z., et al. 1999. Molecular cloning and characterization of a mitogen-activated protein kinase-associated intracellular chloride channel. J. Biol. Chem. 274: 1621-1627.
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. Rønnov-Jessen, L., et al. 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.
4. Schmitz, G. and Kaminski, W.E. 2002. ABCA2: a candidate regulator of neural transmembrane lipid transport. Cell. Mol. Life Sci. 59: 1285-1295.
5. Medlej-Hashim, M., et al. 2002. Non-syndromic recessive deafness in Jordan: mapping of a new locus to chromosome 9q34.3 and prevalence of DFNB1 mutations. Eur. J. Hum. Genet. 10: 391-394.
6. Yang, Y.H., et al. 2005. Effects of formaldehyde inhalation on lung of rats. Biomed. Environ. Sci. 18: 164-168.
7. Klevernic, I.V., et al. 2006. Characterization of the reversible phosphorylation and activation of ERK8. Biochem. J. 394: 365-373.

CHROMOSOMAL LOCATION

Genetic locus: CLIC3 (human) mapping to 9q34.3.

SOURCE

CLIC3 (405) is a mouse monoclonal antibody raised against recombinant CLIC3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

CLIC3 (405) is recommended for detection of CLIC3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CLIC3 siRNA (h): sc-62126, CLIC3 shRNA Plasmid (h): sc-62126-SH and CLIC3 shRNA (h) Lentiviral Particles: sc-62126-V.

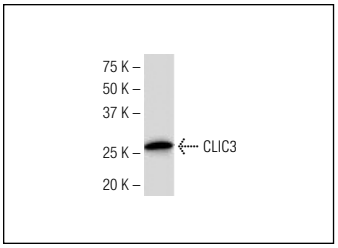
Molecular Weight of CLIC3: 27 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, JAR cell lysate: sc-2276 or JEG-3 whole cell lysate: sc-364255.

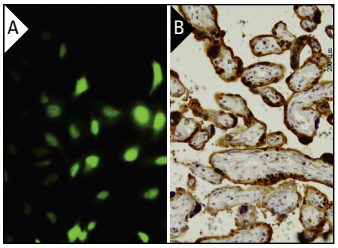
RECOMMENDED SUPPORT REAGENTS

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, 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CLIC3 (405): sc-81872. Western blot analysis of CLIC3 expression in A-431 whole cell lysate.



CLIC3 (405): sc-81872. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization (**A**) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic localization (**B**).

SELECT PRODUCT CITATIONS

1. Wang, Z., et al. 2015. Epigenetic screening of salivary gland mucoepidermoid carcinoma identifies hypomethylation of CLIC3 as a common alteration. Oral Oncol. 51: 1120-1125.

RESEARCH USE

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