

CLIC3 (D-11): sc-390006

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 and 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.

CHROMOSOMAL LOCATION

Genetic locus: CLIC3 (human) mapping to 9q34.3; Clic3 (mouse) mapping to 2 A3.

SOURCE

CLIC3 (D-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 41-79 within an internal region of CLIC3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CLIC3 (D-11) is available conjugated to agarose (sc-390006 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390006 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390006 PE), fluorescein (sc-390006 FITC), Alexa Fluor® 488 (sc-390006 AF488), Alexa Fluor® 546 (sc-390006 AF546), Alexa Fluor® 594 (sc-390006 AF594) or Alexa Fluor® 647 (sc-390006 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390006 AF680) or Alexa Fluor® 790 (sc-390006 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390006 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

CLIC3 (D-11) is recommended for detection of CLIC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) 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 siRNA (m): sc-62127, CLIC3 shRNA Plasmid (h): sc-62126-SH, CLIC3 shRNA Plasmid (m): sc-62127-SH, CLIC3 shRNA (h) Lentiviral Particles: sc-62126-V and CLIC3 shRNA (m) Lentiviral Particles: sc-62127-V.

Molecular Weight of CLIC3: 27 kDa.

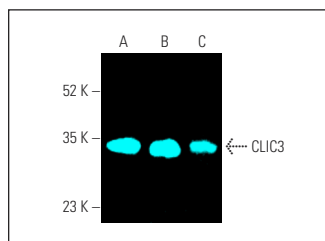
Positive Controls: JAR cell lysate: sc-2276, JEG-3 whole cell lysate: sc-364255 or mouse lung extract: sc-23908.

RECOMMENDED SUPPORT REAGENTS

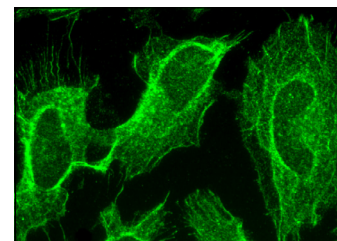
To ensure optimal results, the following support reagents are recommended:

- 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.
- 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 (D-11): sc-390006. Fluorescent western blot analysis of CLIC3 expression in JAR (A) and JEG-3 (B) whole cell lysates and mouse lung tissue extract (C). Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2b} BP-CFL 647: sc-542748.



CLIC3 (D-11): sc-390006. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Vanhoutte, D., et al. 2016. Thrombospondin expression in myofibers stabilizes muscle membranes. *Elife* 5: e17589.
2. Zhu, X., et al. 2023. Identification of immune-related biomarkers in peripheral blood of schizophrenia using bioinformatic methods and machine learning algorithms. *Front. Cell. Neurosci.* 17: 1256184.

STORAGE

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