

CLIC1 (F-9): sc-374202



The Power to Question

BACKGROUND

Chloride intracellular channel 1 (CLIC1), also referred to as NCC27, is a member of the highly conserved family of chloride ion channels that function in both soluble and integral membrane forms. CLIC1 is a monomeric protein that contains a redox-active site similar to glutaredoxin; it functions as an anion-selective channel. CLIC1 forms a dimer when oxidized and is then able to form chloride ion channels in bilayers and vesicles, whereas a reducing environment prevents this from occurring. Insulin concentration also plays a role in CLIC1 regulation, and the hormone may cause a subnuclear relocalization of CLIC1. CLIC1 is associated with macrophage activation; a downregulation of CLIC1 function prevents TNF α release induced by β -Amyloid protein (A- β) stimulation. This suggests a role for CLIC1 in several neurodegenerative processes, such as Alzheimer's disease, a syndrome characterized by an accumulation of β -Amyloid.

REFERENCES

1. Harrop, S.J., et al. 2001. Crystal structure of a soluble form of the intracellular chloride ion channel CLIC1 (NCC27) at 1.4-Å resolution. *J. Biol. Chem.* 276: 44993-45000.
2. Warton, K., et al. 2002. Recombinant CLIC1 (NCC27) assembles in lipid bilayers via a pH-dependent two-state process to form chloride ion channels with identical characteristics to those observed in Chinese hamster ovary cells expressing CLIC1. *J. Biol. Chem.* 277: 26003-26011.

CHROMOSOMAL LOCATION

Genetic locus: CLIC1 (human) mapping to 6p21.33; Clc1 (mouse) mapping to 17 B1.

SOURCE

CLIC1 (F-9) is a mouse monoclonal antibody raised against amino acids 194-241 mapping at the C-terminus of CLIC1 of human origin.

PRODUCT

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

CLIC1 (F-9) is available conjugated to agarose (sc-374202 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374202 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374202 PE), fluorescein (sc-374202 FITC), Alexa Fluor[®] 488 (sc-374202 AF488), Alexa Fluor[®] 546 (sc-374202 AF546), Alexa Fluor[®] 594 (sc-374202 AF594) or Alexa Fluor[®] 647 (sc-374202 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374202 AF680) or Alexa Fluor[®] 790 (sc-374202 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

CLIC1 (F-9) is recommended for detection of CLIC1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 CLIC1 siRNA (h): sc-60400, CLIC1 siRNA (m): sc-60401, CLIC1 shRNA Plasmid (h): sc-60400-SH, CLIC1 shRNA Plasmid (m): sc-60401-SH, CLIC1 shRNA (h) Lentiviral Particles: sc-60400-V and CLIC1 shRNA (m) Lentiviral Particles: sc-60401-V.

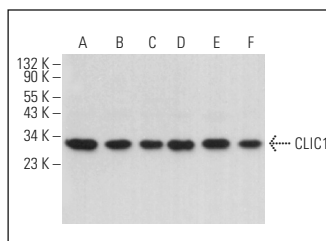
Molecular Weight of CLIC1: 27 kDa.

Positive Controls: JAR cell lysate: sc-2276, HL-60 whole cell lysate: sc-2209 or RAW 264.7 whole cell lysate: sc-2211.

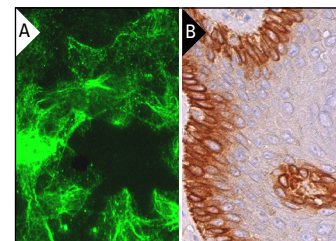
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CLIC1 (F-9): sc-374202. Western blot analysis of CLIC1 expression in HL-60 (A), JAR (B), NIH/3T3 (C), RAW 264.7 (D), IB4 (E) and BYDP (F) whole cell lysates.



CLIC1 (F-9): sc-374202. Immunofluorescence staining of formalin-fixed A-431 cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing cytoplasmic and membrane staining of glandular cells (B).

SELECT PRODUCT CITATIONS

1. Barbieri, F., et al. 2018. Inhibition of chloride intracellular channel 1 (CLIC1) as biguanide class-effect to impair human glioblastoma stem cell viability. *Front. Pharmacol.* 9: 899.

RESEARCH USE

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