

CLIC4/5/6 (A-11): sc-271863

BACKGROUND

CLIC4 (chloride intracellular channel 4), also known as H1, huH1, p64H1, CLIC4L or MTCLIC, is a 253 amino acid single-pass membrane protein that localizes to both nucleus and cytoplasm and contains one GST C-terminal domain. Expressed in placenta, heart and skeletal muscle, as well as in epithelial cells from kidney, colon and esophageal tissue, CLIC4 functions as a monomer that is able to form selective ion channels in target proteins, thereby facilitating the transport of chloride and other ions. CLIC5 (chloride intracellular channel 5) functions in both soluble and integral membrane forms and associates with Actin-based cytoskeletal structures, suggesting involvement in their assembly and maintenance. In addition, CLIC5 may play an important role in inner ear function localizing to the stereocilia and possibly associating with Radixin. CLIC6 (chloride intracellular channel 6) is believed to play a critical role in water-secreting cells, possibly through the regulation of chloride ion transport. The CLIC6 gene is a rare example of large-scale segmental paralogy in which a large (approximately 500 kb) segment on human chromosome (HC) 21 (21q22) is triplicated on HC 1 and HC 6. CLIC6 is also known to interact with dopamine receptors DRD2, DRD3 and DRD4. CLIC6 is primarily expressed in the cytoplasm, however, upon chloride ion efflux from the cell, CLIC6 is translocated to the plasma membrane. CLIC6 has been identified in brain, placenta, pancreas and liver.

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., et al. 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. *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.

SOURCE

CLIC4/5/6 (A-11) is a mouse monoclonal antibody raised against amino acids 181-250 mapping within an internal region of CLIC5 of human origin.

PRODUCT

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

CLIC4/5/6 (A-11) is available conjugated to agarose (sc-271863 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271863 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271863 PE), fluorescein (sc-271863 FITC), Alexa Fluor® 488 (sc-271863 AF488), Alexa Fluor® 546 (sc-271863 AF546), Alexa Fluor® 594 (sc-271863 AF594) or Alexa Fluor® 647 (sc-271863 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271863 AF680) or Alexa Fluor® 790 (sc-271863 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CLIC4/5/6 (A-11) is recommended for detection of CLIC4, CLIC5 and CLIC6 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), 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).

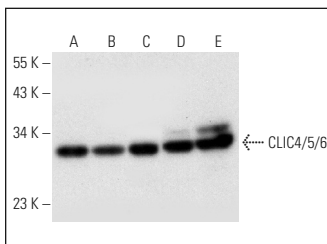
Molecular Weight of CLIC4/5/6: 29/32/71 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, WiDr cell lysate: sc-24779 or K-562 whole cell lysate: sc-2203.

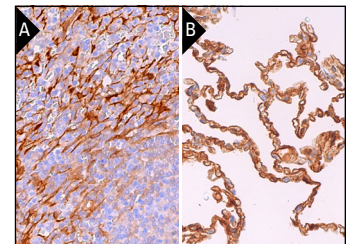
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CLIC4/5/6 (A-11): sc-271863. Western blot analysis of CLIC4/5/6 expression in HeLa (A), Jurkat (B), K-562 (C), HT-29 (D) and WiDr (E) whole cell lysates.



CLIC4/5/6 (A-11): sc-271863. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic and membrane staining of endothelial cells in red pulp (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic and membrane staining of pneumocytes and cytoplasmic and nuclear staining of macrophages (B).

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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