

# CLIC4/5/6 (F-12): sc-365133

## 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

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- 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.
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- Friedli, M., et al. 2003. Identification of a novel member of the CLIC family, CLIC6, mapping to 21q22.12. *Gene* 320: 31-40.
- 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.
- 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.
- 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.
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## RESEARCH USE

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

## SOURCE

CLIC4/5/6 (F-12) 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<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CLIC4/5/6 (F-12) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of CLIC4: 29 kDa.

Molecular Weight of CLIC5: 32 kDa.

Molecular Weight of CLIC6: 71 kDa.

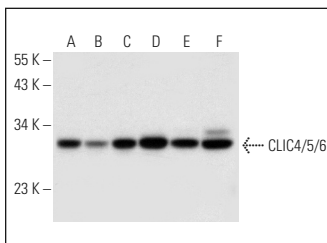
Positive Controls: HL-60 whole cell lysate: sc-2209, JEG-3 whole cell lysate: sc-364255 or K-562 whole cell lysate: sc-2203.

## RECOMMENDED SUPPORT REAGENTS

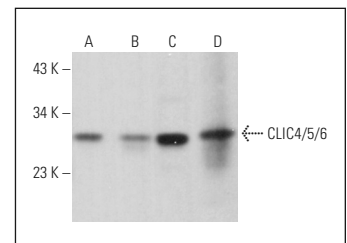
To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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



CLIC4/5/6 (F-12): sc-365133. Western blot analysis of CLIC4/5/6 expression in HeLa (A), Jurkat (B), K-562 (C), JEG-3 (D), HT-29 (E) and WDr (F) whole cell lysates.



CLIC4/5/6 (F-12): sc-365133. Western blot analysis of CLIC4/5/6 expression in JAR (A), HL-60 (B) and IB4 (C) whole cell lysates and rat spleen tissue extract (D).

## STORAGE

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