

CLCA1 (H-54): sc-67157

BACKGROUND

The calcium-activated chloride channel (CLCA) protein family, which includes the human homologs CLCA1 and CLCA2, display distinct tissue distribution patterns. CLCA1 is expressed as a precursor protein that is processed into two cell surface associated subunits and a group of proteins. CLCA1 is up-regulated by interleukin-9 and regulates the expression of mucins. CLCA1 may provide a therapeutic target to control mucus overproduction in airway disease patients with cystic fibrosis. CLCA2 expression is downregulated in breast cancer, therefore CLCA2 is thought to act as a tumor suppressor in normal cells. CLCA3 is a structurally divergent member of the CLCA family that does not function as a channel protein. CLCA4 is a CLCA member that is expressed in human rectal mucosa, CLCA5 shows strong expression in eye and spleen, and CLCA6 is primarily expressed in intestine and stomach.

REFERENCES

1. Gandhi, R., et al. 1998. Molecular and functional characterization of a calcium-sensitive chloride channel from mouse lung. *J. Biol. Chem.* 273: 32096-32101.
2. Gruber, A.D., et al. 1999. Genomic cloning, molecular characterization and functional analysis of human CLCA1, the first human member of the family of Ca²⁺-activated Cl⁻ channel proteins. *Genomics* 54: 200-214.

CHROMOSOMAL LOCATION

Genetic locus: CLCA1 (human) mapping to 1p22.3; Clca1 (mouse) mapping to 3 H2.

SOURCE

CLCA1 (H-54) is a rabbit polyclonal antibody raised against amino acids 861-914 mapping at the C-terminus of CLCA1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CLCA1 (H-54) is recommended for detection of CLCA1 of human, and, to a lesser extent, mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CLCA1 siRNA (h): sc-60393, Clca1 siRNA (m): sc-142370, CLCA1 shRNA Plasmid (h): sc-60393-SH, Clca1 shRNA Plasmid (m): sc-142370-SH, CLCA1 shRNA (h) Lentiviral Particles: sc-60393-V and Clca1 shRNA (m) Lentiviral Particles: sc-142370-V.

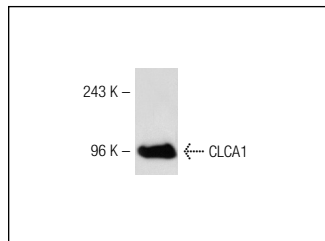
Molecular Weight of CLCA1 precursor: 125 kDa.

Molecular Weight of CLCA1: 37-41 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CLCA1 (H-54): sc-67157. Western blot analysis of CLCA1 expression in mouse liver tissue extract.

SELECT PRODUCT CITATIONS

1. Yu, H., et al. 2010. Interleukin-13 induces mucin 5AC production involving STAT6/SPDEF in human airway epithelial cells. *Cell Commun. Adhes.* 17: 83-92.

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 or our catalog for detailed protocols and support products.



Try **CLCA1 (E-4): sc-271156**, our highly recommended monoclonal alternative to CLCA1 (H-54).