SANTA CRUZ BIOTECHNOLOGY, INC.

CLCA1 (N-14): sc-46866

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 upregulated 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 and therefore, 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. Molecular cloning and transmembrane structure of hCLCA2 from human lung, trachea and mammary gland. Am. J. Physiol. 276: C1261-C1270.

CHROMOSOMAL LOCATION

Genetic locus: CLCA1 (human) mapping to 1p22.3.

SOURCE

CLCA1 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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.

Blocking peptide available for competition studies, sc-46866 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CLCA1 (N-14) is recommended for detection of mature CLCA1 and CLCA1 precursor of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CLCA1 (N-14) is also recommended for detection of mature CLCA1 and CLCA1 precursor in additional species, including equine, canine and porcine.

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

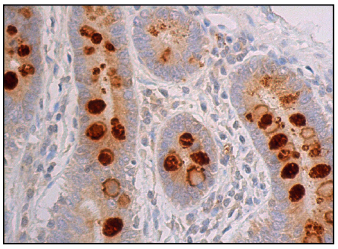
Molecular Weight of CLCA1 precursor: 125 kDa.

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 donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CLCA1 (N-14): sc-46866. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing cytoplasmic staining of goblet cells.

SELECT PRODUCT CITATIONS

1. Ching, J.C., et al. 2013. Secreted hCLCA1 is a signaling molecule that activates airway macrophages. PLoS ONE 8: e83130.

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.