

CLCA2/5 (T-19): sc-50559

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. Genom CLCA1, the first human member of the family of Ca²⁺-activated Cl⁻ channel proteins. *Genomics* 54: 200-214.
3. Gruber, A.D., et al. 1999. Molecular cloning and transmembrane structure of hCLCA2 from human lung, trachea, and mammary gland. *Am. J. Physiol.* 276: 1261-1270.
4. Hauber, H.P., et al. 2003. Increased expression of interleukin-9, interleukin-9 receptor, and the calcium-activated chloride channel hCLCA1 in the upper airways of patients with cystic fibrosis. *Laryngoscope* 113: 1037-1042.
5. Beckley, J.R., et al. 2004. Re-expression of detachment-inducible chloride channel mCLCA5 suppresses growth of metastatic breast cancer cells. *J. Biol. Chem.* 279: 41634-41641.
6. Hauber, H.P., et al. 2004. Expression of hCLCA1 in cystic fibrosis lungs is associated with mucus overproduction. *Eur. Respir. J.* 23: 846-850.
7. Li, X., et al. 2004. CLCA2 tumour suppressor gene in 1p31 is epigenetically regulated in breast cancer. *Oncogene* 23: 1474-1480.

CHROMOSOMAL LOCATION

Genetic locus: CLCA2 (human) mapping to 1p22.3; Clca5 (mouse) mapping to 3 H2.

SOURCE

CLCA2/5 (T-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CLCA2 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-50559 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CLCA2/5 (T-19) is recommended for detection of CLCA2 of human origin and Clca5 of mouse and rat 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).

CLCA2/5 (T-19) is also recommended for detection of CLCA2 in additional species, including canine and bovine.

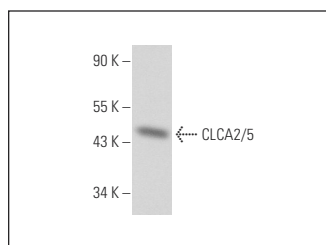
Suitable for use as control antibody for CLCA2 siRNA (h): sc-60394, Clca5 siRNA (m): sc-60395, CLCA2 shRNA Plasmid (h): sc-60394-SH, Clca5 shRNA Plasmid (m): sc-60395-SH, CLCA2 shRNA (h) Lentiviral Particles: sc-60394-V and Clca5 shRNA (m) Lentiviral Particles: sc-60395-V.

Molecular Weight of CLCA2/5 precursor: 120 kDa.

Molecular Weight of CLCA2/5 subunits: 86/34 kDa.

Positive Controls: mouse skin extract: sc-364251, MDA-MB-231 cell lysate: sc-2232 or HeLa whole cell lysate: sc-2200.

DATA



CLCA2/5 (T-19): sc-50559. Western blot analysis of CLCA2/5 expression in mouse skin tissue extract.

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.

MONOS
Satisfaction
Guaranteed

Try **Clca5 (A-5): sc-515682** or **CLCA2 (1D5): sc-517015**, our highly recommended monoclonal alternatives to CLCA2/5 (T-19).