

Clca5 (A-5): sc-515682

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., Elble, R.C., Gruber, A.D., Schreur, K.D., Ji, H.L., Fuller, C.M. and Pauli, B.U. 1998. Molecular and functional characterization of a calcium-sensitive chloride channel from mouse lung. *J. Biol. Chem.* 273: 32096-32101.
2. Gruber, A.D., Elble, R.C., Ji, H.L., Schreur, K.D., Fuller, C.M. and Pauli, B.U. 1998. 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.
3. Gruber, A.D., Schreur, K.D., Ji, H.L., Fuller, C.M. and Pauli, B.U. 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., Manoukian, J.J., Nguyen, L.H., Sobol, S.E., Levitt, R.C., Holroyd, K.J., McElvaney, N.G., Griffin, S. and Hamid, Q. 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.

CHROMOSOMAL LOCATION

Genetic locus: Clca2 (mouse) mapping to 3 H2.

SOURCE

Clca5 (A-5) is a mouse monoclonal antibody raised against amino acids 601-660 mapping within an internal region of Clca5 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Clca5 (A-5) is available conjugated to agarose (sc-515682 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515682 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515682 PE), fluorescein (sc-515682 FITC), Alexa Fluor® 488 (sc-515682 AF488), Alexa Fluor® 546 (sc-515682 AF546), Alexa Fluor® 594 (sc-515682 AF594) or Alexa Fluor® 647 (sc-515682 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515682 AF680) or Alexa Fluor® 790 (sc-515682 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Clca5 (A-5) is recommended for detection of Clca5 of mouse and rat 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).

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

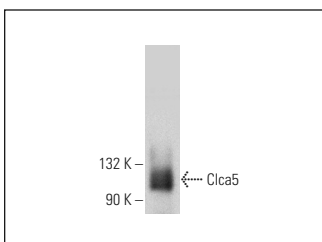
Molecular Weight of Clca5 precursor: 120 kDa.

Positive Controls: mouse skin extract: sc-364251.

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.

DATA



Clca5 (A-5): sc-515682. Western blot analysis of Clca5 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 for detailed protocols and support products.

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