

mucolipin 2 (K-20): sc-51330

BACKGROUND

The mucolipins are a family of cation channel proteins designated mucolipin 1, mucolipin 2 and mucolipin 3. Mucolipin 2 is a lysosomal protein that interacts with the ARF6-associated pathway through co-localization with the cargo proteins CD59 and MHC1. These interactions are thought to traffic and regulate the sorting of certain glycosyl-anchored proteins in the ARF6-associated pathway. Mucolipin 2 is found primarily in the plasma membrane, but is also expressed in intracellular vesicles, tubular structures and B lymphocytes. Mucolipin 2 expression in B lymphocytes and its association with Bruton's tyrosine kinase suggests a possible role in B lymphocyte development. Additionally, defects in the mucolipin 2 gene may be associated with certain neurosensory disorders, as well as swelling of late endosomes and lysosomes.

REFERENCES

1. Di Palma, F., Belyantseva, I.A., Kim, H.J., Vogt, T.F., Kachar, B. and Noben-Trauth, K. 2002. Mutations in Mcoln3 associated with deafness and pigmentation defects in varitint-waddler (Va) mice. *Proc. Natl. Acad. Sci. USA* 99: 14994-14999.
2. Qian, F. and Noben-Trauth, K. 2005. Cellular and molecular function of mucolipins (TRPML) and polycystin 2 (TRPP2). *Pflugers Arch.* 451: 277-285.
3. Chenik, M., Douagi, F., Achour, Y.B., Khalef, N.B., Ouakad, M., Louzir, H. and Dellagi, K. 2005. Characterization of two different mucolipin-like genes from *Leishmania major*. *Parasitol. Res.* 98: 5-13.
4. Venkatachalam, K., Hofmann, T. and Montell, C. 2006. Lysosomal localization of TRPML3 depends on TRPML2 and the mucopolidosis-associated protein TRPML1. *J. Biol. Chem.* 281: 17517-17527.
5. Song, Y., Dayalu, R., Matthews, S.A. and Scharenberg, A.M. 2006. TRPML cation channels regulate the specialized lysosomal compartment of vertebrate B lymphocytes. *Eur. J. Cell Biol.* 85: 1253-1264.
6. Karacsonyi, C., Miguel, A.S. and Puertollano, R. 2007. Mucolipin 2 localizes to the Arf6-associated pathway and regulates recycling of GPI-APs. *Traffic* 8: 1404-1414.

CHROMOSOMAL LOCATION

Genetic locus: MCOLN2 (human) mapping to 1p22.3.

SOURCE

mucolipin 2 (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of mucolipin 2 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-51330 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

mucolipin 2 (K-20) is recommended for detection of mucolipin 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

mucolipin 2 (K-20) is also recommended for detection of mucolipin 2 in additional species, including bovine and porcine.

Suitable for use as control antibody for mucolipin 2 siRNA (h): sc-72371, mucolipin 2 shRNA Plasmid (h): sc-72371-SH and mucolipin 2 shRNA (h) Lentiviral Particles: sc-72371-V.

Molecular Weight of mucolipin 2: 67 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.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.