

# mucolipin 3 (H-60): sc-292078

## BACKGROUND

The mucolipins are a family of cation channel proteins designated mucolipin 1, mucolipin 2 and mucolipin 3. Mucolipins are predominantly expressed within the endocytic pathway and may regulate membrane traffic and/or degradation. Mucolipin 3, also known as TRPML3, TRP-ML3 or MCOLN3, is a 553 amino acid multi-pass membrane protein that belongs to the Polycystin family of transient receptors and localizes to lysosomes. Also expressed in hair cells, mucolipin 3 may play a critical role at the ankle-link region during hair-bundle growth. Mutations in mucolipin 3 have been linked to hair cell degeneration leading to hearing loss and balance disorders. Defects in mucolipin 3 may be associated with mucopolidosis type IV, an autosomal recessive lysosomal storage disorder that causes severe neurodegeneration, achlorhydria and visual impairments. Two isoforms exist due to alternative splicing events.

## REFERENCES

1. Song, Y., et al. 2006. TRPML cation channels regulate the specialized lysosomal compartment of vertebrate B-lymphocytes. *Eur. J. Cell Biol.* 85: 1253-1264.
2. Venkatachalam, K., et al. 2006. Lysosomal localization of TRPML3 depends on TRPML2 and the mucopolidosis-associated protein TRPML1. *J. Biol. Chem.* 281: 17517-17527.
3. Cuajungco, M.P., et al. 2007. TRP channels as candidates for hearing and balance abnormalities in vertebrates. *Biochim. Biophys. Acta* 1772: 1022-1027.
4. Atiba-Davies, M., et al. 2007. TRPML3 and hearing loss in the varitint-waddler mouse. *Biochim. Biophys. Acta* 1772: 1028-1031.
5. Kim, H.J., et al. 2007. Gain-of-function mutation in TRPML3 causes the mouse Varitint-Waddler phenotype. *J. Biol. Chem.* 282: 36138-36142.
6. Karacsonyi, C., et al. 2007. Mucolipin-2 localizes to the Arf6-associated pathway and regulates recycling of GPI-APs. *Traffic* 8: 1404-1414.

## CHROMOSOMAL LOCATION

Genetic locus: MCOLN3 (human) mapping to 1p22.3; Mcoln3 (mouse) mapping to 3 H2.

## SOURCE

mucolipin 3 (H-60) is a rabbit polyclonal antibody raised against amino acids 176-235 mapping within an internal region of mucolipin 3 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.

## 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.

## APPLICATIONS

mucolipin 3 (H-60) is recommended for detection of mucolipin 3 of mouse, rat and human 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).

mucolipin 3 (H-60) is also recommended for detection of mucolipin 3 in additional species, including canine and bovine.

Suitable for use as control antibody for mucolipin 3 siRNA (h): sc-106264, mucolipin 3 siRNA (m): sc-106265, mucolipin 3 shRNA Plasmid (h): sc-106264-SH, mucolipin 3 shRNA Plasmid (m): sc-106265-SH, mucolipin 3 shRNA (h) Lentiviral Particles: sc-106264-V and mucolipin 3 shRNA (m) Lentiviral Particles: sc-106265-V.

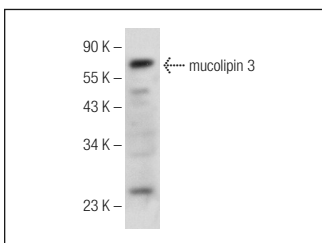
Molecular Weight of mucolipin 3: 68 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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



mucolipin 3 (H-60): sc-292078. Western blot analysis of mucolipin 3 expression in Hep G2 whole cell lysate.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.