SANTA CRUZ BIOTECHNOLOGY, INC.

Rab 3 GAP p150 (T-14): sc-163271



BACKGROUND

Rab 3 GAP p150, also known as RAB3GAP2 or Rab3 GTPase-activating protein non-catalytic subunit, is a ubiquitously expressed protein that contains 1,393 amino acids and belongs to the Rab3-GAP regulatory subunit family. Defects in Rab 3 GAP p150 are the cause of Martsolf and Warburg Micro syndrome. Both syndromes are characterized by congenital cataracts, microphthalmia, postnatal microcephaly and developmental delay, and are inherited in an autosomal recessive manner. The Rab3 GTPase-activating complex is a heterodimer composed of RAB3GAP and Rab 3 GAP p150 that interacts with DMXL2. Existing as two alternatively spliced isoforms, the Rab 3 GAP p150 gene is conserved in chimpanzee, canine, bovine, rat, chicken, zebrafish, fruit fly, mosquito, *A.thaliana* and rice. The Rab 3 GAP p150 gene contains 36 exons and maps to human chromosome 1q41.

REFERENCES

- 1. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 355-364.
- Nagano, F., et al. 1998. Molecular cloning and characterization of the noncatalytic subunit of the Rab3 subfamily-specific GTPase-activating protein. J. Biol. Chem. 273: 24781-24785.
- 3. Aligianis, I.A., et al. 2005. Mutations of the catalytic subunit of RAB3GAP cause Warburg Micro syndrome. Nat. Genet. 37: 221-223.
- 4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609275. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 5. Aligianis, I.A., et al. 2006. Mutation in Rab3 GTPase-activating protein (RAB3GAP) noncatalytic subunit in a kindred with Martsolf syndrome. Am. J. Hum. Genet. 78: 702-707.
- 6. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
- 7. Ng, E.L. and Tang, B.L. 2008. Rab GTPases and their roles in brain neurons and glia. Brain Res. Rev. 58: 236-246.
- Niwa, S., et al. 2008. KIF1Bβ- and KIF1A-mediated axonal transport of presynaptic regulator Rab3 occurs in a GTP-dependent manner through DENN/MADD. Nat. Cell Biol. 10: 1269-1279.

CHROMOSOMAL LOCATION

Genetic locus: RAB3GAP2 (human) mapping to 1q41; Rab3gap2 (mouse) mapping to 1.

SOURCE

Rab 3 GAP p150 (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rab 3 GAP p150 of human origin.

STORAGE

Store at 4° C, **D0 NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163271 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rab 3 GAP p150 (T-14) is recommended for detection of Rab 3 GAP p150 of mouse, rat and 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); non cross-reactive with Rab 3 GAP p130.

Rab 3 GAP p150 (T-14) is also recommended for detection of Rab 3 GAP p150 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Rab 3 GAP p150 siRNA (h): sc-78762, Rab 3 GAP p150 shRNA Plasmid (h): sc-78762-SH and Rab 3 GAP p150 shRNA (h) Lentiviral Particles: sc-78762-V.

Molecular Weight of Rab 3 GAP p150 isoforms: 156/23 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) Immunofluo-rescence: 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.

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 Satisfation Guaranteed

Try Rab 3 GAP p150 (B-9): sc-398315 or Rab 3 GAP p150 (H-7): sc-398314, our highly recommended monoclonal alternatives to Rab 3 GAP p150 (T-14).