SANTA CRUZ BIOTECHNOLOGY, INC.

SMAP1 (Q-18): sc-162230

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SMAP1 (stromal membrane-associated protein 1), also known as small ArfGAP 1, is a 467 amino acid peripheral membrane protein that localizes to the cytoplasmic side of the cell membrane where it participates in clathrin-dependent endocytosis. A GTPase activating protein for ARF6, SMAP1 is widely expressed in tissues such as lymph node, spinal cord, bone marrow, adrenal gland, trachea, stomach,thyroid and embryonic hematopoietic tissues. Containing one Arf-GAP domain, SMAP1 exists as multiple isoforms as a results of alternative splicing events and is encoded by a gene that maps to human chromosome 6q13. Human chromosome 6 contains 170 million base pairs, comprises nearly 6% of the human genome and is associated with Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder.

REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. Hum. Mol. Genet. 3: 1561-1564.
2. Sato, Y., et al. 1998. Involvement of stromal membrane-associated protein (SMAP-1) in erythropoietic microenvironment. J. Biochem. 124: 209-216.
3. Obinata, M., et al. 1999. Cellular and molecular regulation of an erythropoietic inductive microenvironment (EIM). Cell Struct. Funct. 24: 171-179.
4. Marcos, I., et al. 2002. Cloning, characterization and chromosome mapping of the human SMAP1 gene. Gene 292: 167-171.
5. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. Proc. Natl. Acad. Sci. USA 100: 5956-5961.
6. Barragan, I., et al. 2005. Mutation screening of three candidate genes, ELOVL5, SMAP1 and GLULD1 in autosomal recessive retinitis pigmentosa. Int. J. Mol. Med. 16: 1163-1167.
7. Tanabe, K., et al. 2005. A novel GTPase-activating protein for ARF6 directly interacts with clathrin and regulates clathrin-dependent endocytosis. Mol. Biol. Cell 16: 1617-1628.

CHROMOSOMAL LOCATION

Genetic locus: SMAP1 (human) mapping to 6q13; Smap1 (mouse) mapping to 1 A5.

SOURCE

SMAP1 (Q-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SMAP1 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-162230 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

SMAP1 (Q-18) is recommended for detection of SMAP1 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); non cross-reactive with SMAP1L.

SMAP1 (Q-18) is also recommended for detection of SMAP1 in additional species, including canine and porcine.

Suitable for use as control antibody for SMAP1 siRNA (h): sc-95497, SMAP1 siRNA (m): sc-153615, SMAP1 shRNA Plasmid (h): sc-95497-SH, SMAP1 shRNA Plasmid (m): sc-153615-SH, SMAP1 shRNA (h) Lentiviral Particles: sc-95497-V and SMAP1 shRNA (m) Lentiviral Particles: sc-153615-V.

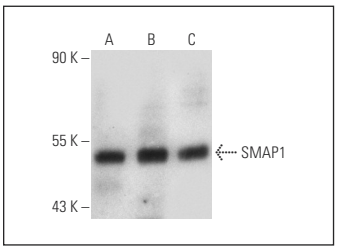
Molecular Weight of SMAP1: 50 kDa.

Positive Controls: rat brain extract: sc-2392, SMAP1 (h): 293 Lysate: sc-114653 or Caki-1 cell lysate: sc-2224.

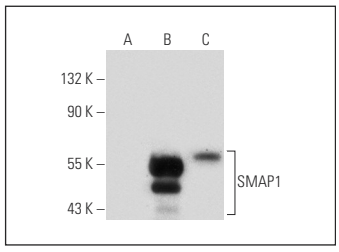
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SMAP1 (Q-18): sc-162230. Western blot analysis of SMAP1 expression in HeLa (**A**), SK-BR-3 (**B**) and Caki-1 (**C**) whole cell lysates.



SMAP1 (Q-18): sc-162230. Western blot analysis of SMAP1 expression in non-transfected: sc-110760 (**A**) and human SMAP1 transfected: sc-114653 (**B**) 293 whole cell lysates and rat brain tissue extract (**C**).

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.