

# SMAP1 (T-18): sc-162231

## 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 result 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., van Beersum, S.E., Warman, M.L., Olsen, B.R., Ropers, H.H. and Mariman, E.C. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. *Hum. Mol. Genet.* 3: 1561-1564.
2. Sato, Y., Hong, H.N., Yanai N. and Obinata, M. 1998. Involvement of stromal membrane-associated protein (SMAP-1) in erythropoietic microenvironment. *J. Biochem.* 124: 209-216.
3. Obinata, M. and Yanai, N. 1999. Cellular and molecular regulation of an erythropoietic inductive microenvironment (EIM). *Cell Struct. Funct.* 24: 171-179.
4. Marcos, I., Borrego, S., Rodríguez de Córdoba, S., Galán, J.J. and Antiñolo, G. 2002. Cloning, characterization and chromosome mapping of the human SMAP1 gene. *Gene* 292: 167-171.
5. Cesari, R., Martin, E.S., Calin, G.A., Pentimalli, F., Bichi, R., McAdams, H., Trapasso, F., Drusco, A., Shimizu, M., Masciullo, V., D'Andrilli, G., Scambia, G., Picchio, M.C., Alder, H., Godwin A.K. and Croce, C.M. 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., Marcos, I., Borrego S. and Antiñolo, G. 2005. Mutation screening of three candidate genes, ELOVL5, SMAP1 and GLULD1 in autosomal recessive retinitis pigmentosa. *Int. J. Mol. Med.* 16: 1163-1167.

## CHROMOSOMAL LOCATION

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

## SOURCE

SMAP1 (T-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-162231 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

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

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.

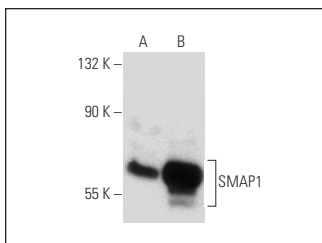
Molecular Weight of SMAP1: 50 kDa.

Positive Controls: SMAP1 (m2): 293T Lysate: sc-110204, SK-BR-3 cell lysate: sc-2218 or HeLa whole cell lysate: sc-2200.

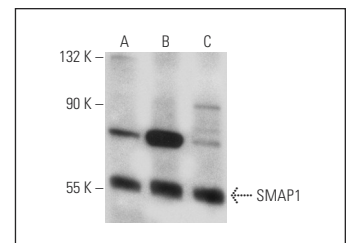
## RECOMMENDED SECONDARY REAGENTS

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 (T-18): sc-162231. Western blot analysis of SMAP1 expression in non-transfected: sc-117752 (A) and mouse SMAP1 transfected: sc-110204 (B) 293T whole cell lysates.



SMAP1 (T-18): sc-162231. Western blot analysis of SMAP1 expression in HeLa (A), SK-BR-3 (B) and Caki-1 (C) whole cell lysates.

## 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.