SMAP1 (N-12): sc-162229



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 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.
- 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.
- Obinata, M. and Yanai, N. 1999. Cellular and molecular regulation of an erythropoietic inductive microenvironment (EIM). Cell Struct. Funct. 24: 171-179.
- 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.
- 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.
- 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.
- 7. Tanabe, K., Torii, T., Natsume, W., Braesch-Andersen, S., Watanabe T. and Satake, M. 2005. A novel GTPase-activating protein for ARF6 directly interacts with clathrin and regulates clathrin-dependent endocytosis. Mol. Biol. Cell 16: 1617-1628.
- 8. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611372. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

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

RESEARCH USE

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

SOURCE

SMAP1 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of SMAP1 of human origin.

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-162229 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SMAP1 (N-12) 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 μ g per 100-500 μ g 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.

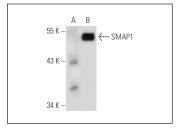
SMAP1 (N-12) is also recommended for detection of SMAP1 in additional species, including canine, bovine and porcine.

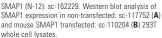
Suitable for use as control antibody for SMAP1 siRNA (h): sc-95497, SMAP1 siRNA (m): sc-153615, SMAP1 shRNA Plasmid (h): sc-95497-SH, SMAP1 shRNA Plasmid (m): sc-153615-SH, SMAP1 shRNA (h) Lentiviral Particles: sc-95497-V and SMAP1 shRNA (m) Lentiviral Particles: sc-153615-V.

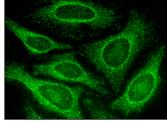
Molecular Weight of SMAP1: 50 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, rat brain extract: sc-2392 or SMAP1 (m2): 293T Lysate: sc-110204.

DATA







SMAP1 (N-12): sc-162229. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

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.