SANTA CRUZ BIOTECHNOLOGY, INC.

SAP 97 (S-19): sc-26532

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The discs large (dlg) tumor suppressor gene was first identified in *Drosophila* through genetic analysis of germline mutations. Several mammalian homologs were subsequently identified and categorized into a protein family designated MAGUK (membrane-associated guanylate kinase homolog). The mammalian homolog of dlg, SAP 97, is also known as hdlg-1 (human) and NE-dlg (neuronal and endocrine). The rat synaptic protein SAP 90 (also designated PSD-95) also shares homology with these proteins. MAGUKs are localized at the membrane-cytoskeleton interface and contain several distinct domains which suggest a role for these proteins in intracellular signal transduction. Interaction of hdlg-1 and NE-dlg with the tumor suppresor protein APC suggest that MAGUK proteins may also play a role in regulation of growth.

REFERENCES

1. Gateff, E., et al. 1989. Tumor-suppressor genes of *Drosophila melanogaster*. Crit. Rev. Oncog. 1: 221-245.
2. Cho, K.O., et al. 1992. The rat brain postsynaptic density fraction contains a homolog of the *Drosophila* discs-large tumor suppressor protein. Neuron 9: 929-942.
3. Woods, D.F., et al. 1993. ZO-1, DlgA and PSD-95/SAP 90: homologous proteins in tight, septate and synaptic cell junctions. Mech. Dev. 44: 85-89.
4. Lue, R.A., et al. 1994. Cloning and characterization of hdlg: the human homologue of the *Drosophila* discs large tumor suppressor binds to protein 4.1. Proc. Natl. Acad. Sci. USA 91: 9818-9822.
5. Muller, B.M., et al. 1995. Molecular characterization and spatial distribution of SAP 97, a novel presynaptic protein homologous to SAP 90 and the *Drosophila* discs-large tumor suppressor protein. J. Neurosci. 15: 2354-2356.

CHROMOSOMAL LOCATION

Genetic locus: DLG1 (human) mapping to 3q29; Dlg1 (mouse) mapping to 16 B2.

SOURCE

SAP 97 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SAP 97 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-26532 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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

SAP 97 (S-19) is recommended for detection of SAP 97 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).

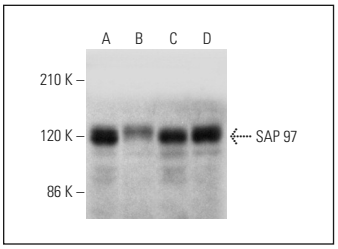
SAP 97 (S-19) is also recommended for detection of SAP 97 in additional species, including equine and canine.

Suitable for use as control antibody for SAP 97 siRNA (h): sc-36452, SAP 97 siRNA (m): sc-36453, dlg-1 siRNA (r): sc-270272, SAP 97 shRNA Plasmid (h): sc-36452-SH, SAP 97 shRNA Plasmid (m): sc-36453-SH, dlg-1 shRNA Plasmid (r): sc-270272-SH, SAP 97 shRNA (h) Lentiviral Particles: sc-36452-V, SAP 97 shRNA (m) Lentiviral Particles: sc-36453-V and dlg-1 shRNA (r) Lentiviral Particles: sc-270272-V.

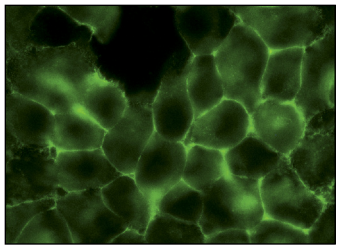
Molecular Weight of SAP 97: 130-135 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or SK-N-SH cell lysate: sc-2410.

DATA



SAP 97 (S-19): sc-26532. Western blot analysis of SAP 97 expression in MCF7 (**A**), HeLa (**B**), SK-N-SH (**C**) and SH-SY5Y (**D**) whole cell lysates.



SAP 97 (S-19): sc-26532. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Potapova, I.A., et al. 2007. Voltage-gated ion channel Kv4.3 is associated with Rap guanine nucleotide exchange factors and regulates angiotensin receptor type 1 signaling to small G protein Rap. FEBS J. 274: 4375-4384.
2. Vieira, V., et al. 2008. Differential regulation of dlg1, Scrib, and Lgl1 expression in a transgenic mouse model of ocular cancer. Mol. Vis. 14: 2390-2403.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS Satisfaction Guaranteed

Try **SAP 97 (2D11): sc-9961** or **SAP 97 (D-9): sc-514478**, our highly recommended monoclonal alternatives to SAP 97 (S-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **SAP 97 (2D11): sc-9961**.