SANTA CRUZ BIOTECHNOLOGY, INC.

SAP 97 (D-9): sc-514478

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. and Mechler, B.M. 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. Stehle, T. and Schulz, G.E. 1992. Refined structure of the complex between guanylate kinase and its substrate GMP at 2.0 α resolution. J. Mol. Biol. 224: 1127-1141.
4. Woods, D.F. and Bryant, P.J. 1993. ZO-1, DlgA and PSD-95/SAP90: homologous proteins in tight, septate and synaptic cell junctions. Mech. Dev. 44: 85-89.
5. 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.

CHROMOSOMAL LOCATION

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

SOURCE

SAP 97 (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 22-41 near the N-terminus of SAP 97 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514478 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

SAP 97 (D-9) is recommended for detection of SAP 97 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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

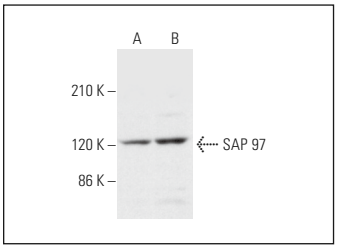
Molecular Weight of SAP 97 splice variants: 130-135 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410 or SH-SY5Y cell lysate: sc-3812.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SAP 97 (D-9): sc-514478. Western blot analysis of SAP 97 expression in SK-N-SH (**A**) and SH-SY5Y (**B**) whole cell lysates.

RESEARCH USE

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

CONJUGATES

See **SAP 97 (2D11): sc-9961** for SAP 97 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.