

# SAP 97 (2D11): sc-9961

## 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 suppressor protein APC suggest that MAGUK proteins may also play a role in regulation of growth.

## CHROMOSOMAL LOCATION

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

## SOURCE

SAP 97 (2D11) is a mouse monoclonal antibody raised against amino acids 1-229 of SAP 97 of human origin and recognizing an epitope between amino acids 1-161 of SAP 97 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SAP 97 (2D11) is available conjugated to agarose (sc-9961 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-9961 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-9961 PE), fluorescein (sc-9961 FITC), Alexa Fluor® 488 (sc-9961 AF488), Alexa Fluor® 546 (sc-9961 AF546), Alexa Fluor® 594 (sc-9961 AF594) or Alexa Fluor® 647 (sc-9961 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-9961 AF680) or Alexa Fluor® 790 (sc-9961 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

SAP 97 (2D11) is recommended for detection of SAP 97 (also designated Dlg1) of mouse, rat, human and canine 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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.

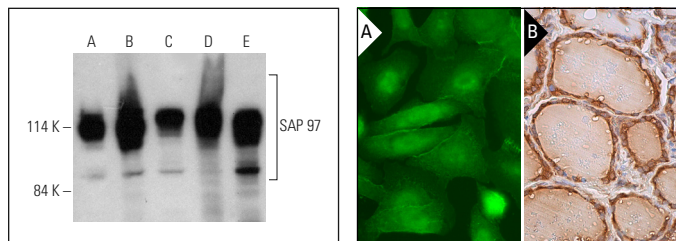
Molecular Weight of SAP 97: 130-135 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HUV-EC-C whole cell lysate: sc-364180 or HeLa whole cell lysate: sc-2200.

## STORAGE

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

## DATA



SAP 97 (2D11) HRP: sc-9961 HRP. Direct western blot analysis of SAP 97 expression in HeLa (A), MCF7 (B), HUV-EC-C (C), MDCK (D) and SK-BR-3 (E) whole cell lysates.

SAP 97 (2D11) Alexa Fluor® 488: sc-9961 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing membrane and cell junctions localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). SAP 97 (2D11): sc-9961. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Kuhne, C., et al. 2000. Differential regulation of human papillomavirus E6 by protein kinase A: conditional degradation of human discs large protein by oncogenic E6. *Oncogene* 19: 5884-5891.
- Macdonald, A.I., et al. 2012. A functional interaction between the MAGUK protein hDlg and the gap junction protein connexin 43 in cervical tumour cells. *Biochem. J.* 446: 9-21.
- Philippe, M., et al. 2013. Discs large 1 (Dlg1) scaffolding protein participates with clathrin and adaptator protein complex 1 (AP-1) in forming Weibel-Palade bodies of endothelial cells. *J. Biol. Chem.* 288: 13046-13056.
- Lanna, A., et al. 2014. The kinase p38 activated by the metabolic regulator AMPK and scaffold TAB1 drives the senescence of human T cells. *Nat. Immunol.* 15: 965-972.
- Menga, A., et al. 2015. The mitochondrial aspartate/glutamate carrier isoform 1 gene expression is regulated by CREB in neuronal cells. *Int. J. Biochem. Cell Biol.* 60: 157-166.
- Sugihara, T., et al. 2016. Loss of the cell polarity determinant human Discs-large is a novel molecular marker of nodal involvement and poor prognosis in endometrial cancer. *Br. J. Cancer* 114: 1012-1018.
- Cavatorta, A.L., et al. 2017. DLG1 polarity protein expression associates with the disease progress of low-grade cervical intraepithelial lesions. *Exp. Mol. Pathol.* 102: 65-69.

## RESEARCH USE

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

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