

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 IgG₁ 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.

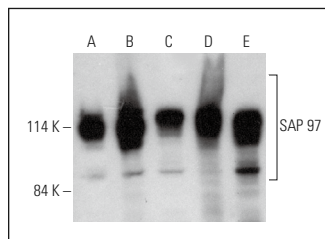
Molecular Weight of SAP 97: 130-135 kDa.

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

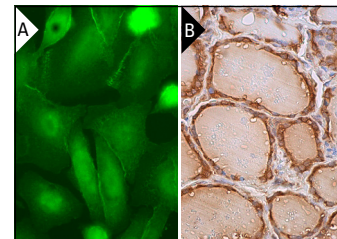
STORAGE

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.
- Gagnoux-Palacios, L., et al. 2018. Cell polarity and adherens junction formation inhibit epithelial Fas cell death receptor signaling. *J. Cell Biol.* 217: 3839-3852.
- Liberti, D.C., et al. 2019. Dnmt1 is required for proximal-distal patterning of the lung endoderm and for restraining alveolar type 2 cell fate. *Dev. Biol.* 454: 108-117.
- Jang, Y. 2020. Endurance exercise-induced expression of autophagy-related protein coincides with anabolic expression and neurogenesis in the hippocampus of the mouse brain. *Neuroreport* 31: 442-449.
- Guha, J., et al. 2021. Disc large homolog 1 is critical for early T cell receptor micro cluster formation and activation in human T cells. *Vaccines* 9: 1446.
- Sakurai, T., et al. 2022. GPR125 (ADGRA3) is an autocleavable adhesion GPCR that traffics with Dlg1 to the basolateral membrane and regulates epithelial apico-basal polarity. *J. Biol. Chem.* 298: 102475.
- Scott, H., et al. 2023. The human discs large protein 1 interacts with and maintains connexin 43 at the plasma membrane in keratinocytes. *J. Cell Sci.* 136: jcs259984.

RESEARCH USE

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

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