

## NE-dlg (D-6): sc-376144



The Power to Question

## BACKGROUND

The *Drosophila* 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 termed MAGUK (membrane-associated guanylate kinase homolog). Human homologs of dlg include hdlg-1 (rat SAP-97) and NE-dlg (neuronal and endocrine dlg). The rat synaptic protein SAP90 (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.

## 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. Stehle, T., et al. 1992. Refined structure of the complex between guanylate kinase and its substrate GMP at 2.0 Å resolution. J. Mol. Biol. 224: 1127-1141.
4. Woods, D.F., et al. 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.
6. Muller, B.M., et al. 1995. Molecular characterization and spatial distribution of SAP97, a novel presynaptic protein homologous to SAP90 and the *Drosophila* discs-large tumor suppressor protein. J. Neurosci. 15: 2354-2356.

## CHROMOSOMAL LOCATION

Genetic locus: DLG3 (human) mapping to Xq13.1; Dlg3 (mouse) mapping to X C3.

## SOURCE

NE-dlg (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 14-41 at the N-terminus of NE-dlg 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.

Blocking peptide available for competition studies, sc-376144 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

NE-dlg (D-6) is recommended for detection of NE-dlg 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

NE-dlg (D-6) is also recommended for detection of NE-dlg in additional species, including porcine.

Suitable for use as control antibody for NE-dlg siRNA (h): sc-42006, NE-dlg siRNA (m): sc-42007, NE-dlg shRNA Plasmid (h): sc-42006-SH, NE-dlg shRNA Plasmid (m): sc-42007-SH, NE-dlg shRNA (h) Lentiviral Particles: sc-42006-V and NE-dlg shRNA (m) Lentiviral Particles: sc-42007-V.

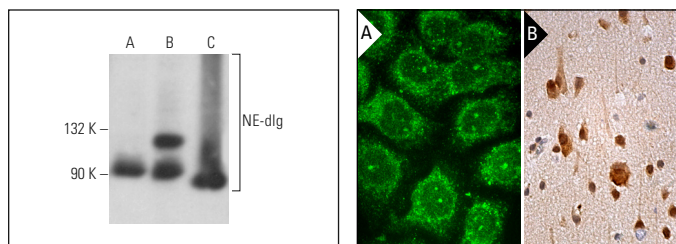
Molecular Weight of NE-dlg: 100 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, C6 whole cell lysate: sc-364373 or SK-BR-3 cell lysate: sc-2218.

## 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



NE-dlg (D-6): sc-376144. Western blot analysis of NE-dlg expression in SH-SY5Y (A), C6 (B) and SK-BR-3 (C) whole cell lysates.

NE-dlg (D-6): sc-376144. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic and nuclear staining of glial and neuronal cells (B).

## RESEARCH USE

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