SANTA CRUZ BIOTECHNOLOGY, INC.

NE-dlg (A-1): sc-514889

SANTA CRUZ BIOTECHNOLOGY

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

REFERENCES

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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.
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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.
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.
7. Matsumine, A., et al. 1996. Binding of APC to the human homolog of the *Drosophila* discs large tumor suppressor protein. Science 272: 1020-1023.
8. Makino, K., et al. 1997. Cloning and characterization of NE-dlg: a novel human homolog of the *Drosophila* discs large (dlg) tumor suppressor protein interacts with the APC protein. Oncogene 14: 2425-2433.

CHROMOSOMAL LOCATION

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

SOURCE

NE-dlg (A-1) is a mouse monoclonal antibody raised against amino acids 1-132 mapping at the N-terminus of NE-dlg of human origin.

PRODUCT

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

APPLICATIONS

NE-dlg (A-1) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

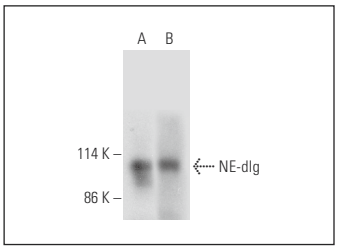
Molecular Weight of NE-dlg: 100 kDa.

Positive Controls: human brain extract: sc-364375 or mouse brain extract: sc-2253.

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



NE-dlg (A-1): sc-514889. Western blot analysis of NE-dlg expression in mouse brain (**A**) and human brain (**B**) tissue extracts.

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.

PROTOCOLS

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