

# NE-dlg (B-3): sc-514720

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

NE-dlg (B-3) 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<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NE-dlg (B-3) is available conjugated to agarose (sc-514720 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514720 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514720 PE), fluorescein (sc-514720 FITC), Alexa Fluor® 488 (sc-514720 AF488), Alexa Fluor® 546 (sc-514720 AF546), Alexa Fluor® 594 (sc-514720 AF594) or Alexa Fluor® 647 (sc-514720 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514720 AF680) or Alexa Fluor® 790 (sc-514720 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

NE-dlg (B-3) 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.

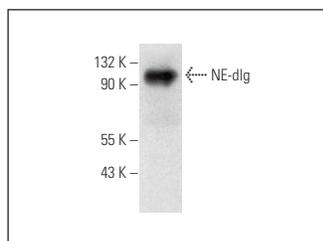
Molecular Weight of NE-dlg: 100 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812 or mouse brain extract: sc-2253.

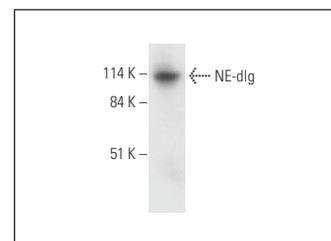
## RECOMMENDED SUPPORT REAGENTS

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 (B-3): sc-514720. Western blot analysis of NE-dlg expression in mouse brain tissue extract.



NE-dlg (B-3): sc-514720. Western blot analysis of NE-dlg expression in SH-SY5Y whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.