

Technical Data Sheet

Purified Mouse Anti-Dlg

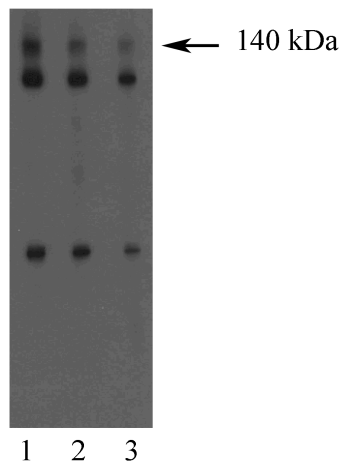
Product Information

Material Number:	610874
Size:	50 µg
Concentration:	250 µg/ml
Clone:	12/Dlg
Immunogen:	Human Dlg aa. 5-213
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat
Target MW:	140 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

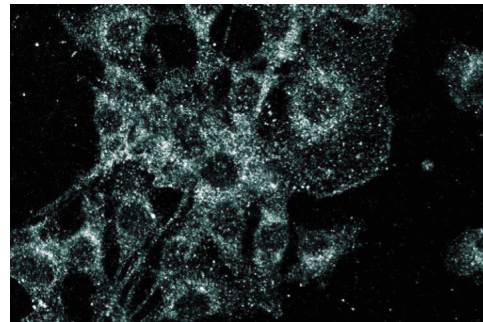
Description

The human homologue of the *Drosophila* discs large tumor suppressor protein (hDlg) is a member of the MAGUKs (membrane associated guanylate kinases) protein family. Members of this family (PSD-95, ZO-1, ZO-2, and human erythroid p55) are involved in cell structure and signaling events. The hDlg protein consists of several domains: three PDZ (PSD-95/Discs large/ZO-1) domains, an SH3 domain, and a guanylate kinase-like domain. However, hDlg contains a proline rich N-terminus region consisting of two SH3 domain binding sites that are not normally found in the MAGUKs family. The PDZ domains mediate the interaction of several proteins, such as Shaker-type K⁺ channel proteins and the APC tumor suppressor protein. Dlg is a peripheral membrane that associates with the cytoskeleton. The cellular location and binding sites of Dlg suggest a role in structure, signal transduction, and growth regulation. Supporting these probable Dlg functions are reports demonstrating that recessive mutations in *Drosophila dlg* lead to imaginal disc neoplasia and death. Also, Dlg has been reported to bind p56 [lck] tyrosine kinase and the Kv1.3 channel in human T lymphocytes.

This antibody clone to Dlg has been reported to immunoprecipitate and weakly recognize PSD-95 on rat cerebrum lysates, presumably due to crossreactivity between homologous regions of the two proteins (i.e amino acid regions 104-119 and 193-198).



Western blot analysis of Dlg on an A431 cell lysate (Human epithelial carcinoma; ATCC CRL-1555). Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-Dlg antibody. Bands are observed to be migrating at 140 kDa, 95-97 kDa and 37 kDa.



Immunofluorescence staining of RSV-3T3 cells.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunoprecipitation	Tested During Development

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.

References

Adey NB, Huang L, Ormonde PA, et al. Threonine phosphorylation of the MMAC1/PTEN PDZ binding domain both inhibits and stimulates PDZ binding. *Cancer Res.* 2000; 60(1):35-37. (Biology: Western blot)

Caruana G, Bernstein A. Craniofacial dysmorphogenesis including cleft palate in mice with an insertional mutation in the discs large gene. *Mol Cell Biol.* 2001; 21(5):1475-1483. (Biology: Immunofluorescence, Western blot)

Lue RA, Brandin E, Chan EP, Branton D. Two independent domains of hDlg are sufficient for subcellular targeting: the PDZ1-2 conformational unit and an alternatively spliced domain. *J Cell Biol.* 1996; 135(4):1125-1137. (Biology)

Lue RA, Marfatia SM, Branton D, Chishti AH. Cloning and characterization of hdlg: the human homologue of the Drosophila discs large tumor suppressor binds to protein 4.1. *Proc Natl Acad Sci U S A.* 1994; 91(21):9818-9822. (Biology)

Vazquez F, Grossman SR, Takahashi Y, Rokas MV, Nakamura N, Sellers WR. Phosphorylation of the PTEN tail acts as an inhibitory switch by preventing its recruitment into a protein complex. *J Biol Chem.* 2001; 276(52):48627-48630. (Biology: Western blot)