

Technical Data Sheet

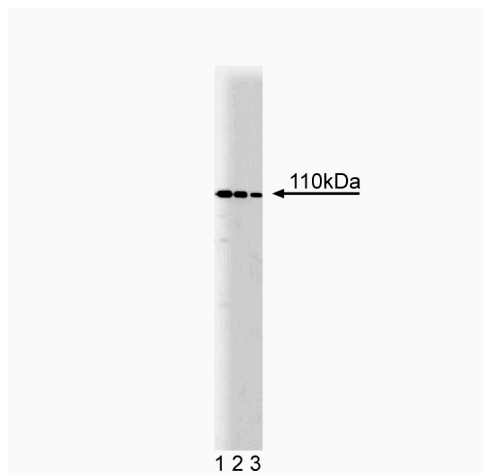
Purified Mouse Anti-Mouse Nedd4**Product Information**

Material Number:	611481
Size:	150 µg
Concentration:	250 µg/ml
Clone:	15/Nedd4
Immunogen:	Mouse Nedd4 aa. 173-262
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Mouse
Target MW:	110 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

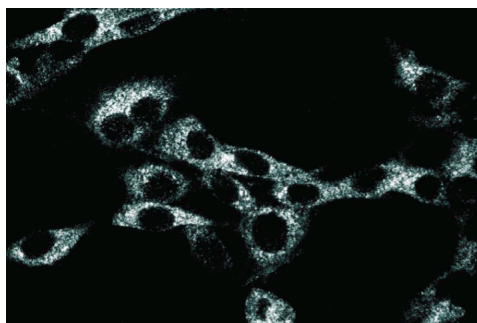
Description

Regulated protein degradation involves conjugation of ubiquitin to proteins for degradation by the 26S proteasome. Protein ubiquitination is the end product of a multienzyme cascade that involves sequential thiol-ester bond interactions between ubiquitin and enzymes termed E1-E3. Neuronal precursor cell-expressed developmentally down-regulated 4 (Nedd4) is a multimodular ubiquitin protein ligase E3 that contains a Ca²⁺-lipid binding domain (CaLB), 3 WW domains, and a C-terminal ubiquitin protein ligase hect domain. The CaLB is characteristic of C2 domain-containing proteins, such as PKC, phospholipase C, phospholipase A2, and synaptogamin. Nedd4 is expressed differentially in the fetal and adult brain and its highest expression is in lung and kidney. Although it localizes in the cytoplasm, increased intracellular Ca²⁺ induces plasma membrane association of Nedd4. In addition, increases in intracellular Na⁺ leads to Nedd4 binding to epithelial Na⁺ channels via its WW domains, which results in targeting of Na⁺ channels for degradation. Thus, the subcellular localization and protein interactions of Nedd4 are regulated in a Ca²⁺- and Na⁺-dependent manner.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.



Western blot analysis of Nedd4 on a BC3H1 cell lysate (murine skeletal muscle cells). Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the anti-Nedd4 antibody.



Immunofluorescence staining of RSV-3T3 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Harvey KF, Dinudom A, Komwatana P, et al. All three WW domains of murine Nedd4 are involved in the regulation of epithelial sodium channels by intracellular Na⁺. *J Biol Chem.* 1999; 274(18):12525-12530.(Biology)

Hatakeyama S, Jensen JP, Weissman AM. Subcellular localization and ubiquitin-conjugating enzyme (E2) interactions of mammalian HECT family ubiquitin protein ligases. *J Biol Chem.* 1997; 272(24):15085-15092.(Biology)

Peruzzi F, Prisco M, Morriene A, Valentini B, Baserga R. Anti-apoptotic signaling of the insulin-like growth factor-I receptor through mitochondrial translocation of c-Raf and Nedd4. *J Biol Chem.* 2001; 276(28):25990-25996.(Biology: Western blot)

Plant PJ, Yeger H, Staub O, Howard P, Rotin D. The C2 domain of the ubiquitin protein ligase Nedd4 mediates Ca²⁺-dependent plasma membrane localization. *J Biol Chem.* 1997; 272(51):32329-32336.(Biology)