#4013 Store at -20°C

NEDD4L Antibody

☑ 100 µl
(10 western blots)

Cell Signaling TECHNOLOGY®

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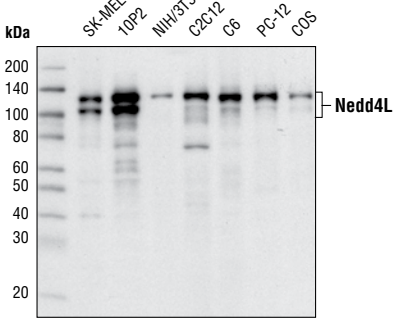
Entrez-Gene ID #23327
Swiss-Prot Acc. #Q96PU5

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP, IF-IC Endogenous	H, M, R, Mk	110, 135 kDa	Rabbit**

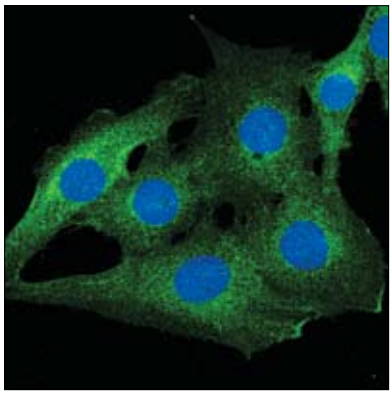
Background: NEDD4 (neural precursor expressed, developmentally down-regulated protein 4) was originally identified as a gene that is highly expressed in the early mouse embryonic central nervous system (1). More recently, a family of NEDD4-like proteins has been defined that includes seven members in humans (2). NEDD4 and NEDD4-like (NEDD4L) proteins contain multiple functional domains including a calcium-dependent phospholipid and membrane binding domain (C2 domain), two to four protein binding domains (WW domains), and an E3 ubiquitin-protein ligase domain (HECT domain). NEDD4 and NEDD4L have been shown to downregulate both neuronal voltage-gated Na^+ channels (NaVs) and epithelial Na^+ channels (ENaCs) in response to increased intracellular Na^+ concentrations (3,4). The WW domains of NEDD4 bind to PY motifs (amino acid sequence PPXY) found in multiple NaV and ENaC proteins; ubiquitination of these proteins is mediated by the HECT domain of NEDD4 and results in their internalization and removal from the plasma membrane. Mutation of the PY motifs in ENaC proteins is associated with Liddle's Syndrome, an autosomal-dominant form of hypertension (5). In addition to targeting sodium channels, NEDD4L has also been shown to negatively regulate TGF-β signaling by targeting Smad2 for degradation (6). Mouse and human NEDD4 are rapidly cleaved by caspase proteins during apoptosis, although the significance of this cleavage is not clear (7).

Specificity/Sensitivity: NEDD4L Antibody detects endogenous levels of total NEDD4L protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu271 of human NEDD4L protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from various cell lines using NEDD4L Antibody.



Confocal immunofluorescent analysis of C2C12 cells using NEDD4L Antibody (green). Blue pseudocolor = DRAQ5® #4084 (DNA fluorescent dye).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50
Immunofluorescence (IF-IC)	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

(1) Kumar, S. et al. (1992) *Biochem. Biophys. Res. Commun.* 185, 1155–61.

(2) Harvey, K.F. and Kumar, S. (1999) *Trends Cell Biol.* 9, 166–9.

(3) Dinudom, A. et al. (1998) *Proc. Natl. Acad. Sci. USA* 95, 7169–73.

(4) Goulet, C.C. et al. (1998) *J. Biol. Chem.* 273, 30012–7.

(5) Staub, O. et al. (1996) *EMBO J.* 15, 2371–80.

(6) Kuratomi, G. et al. (2005) *Biochem J.* 386, 461–70.

(7) Harvey, K.F. et al. (1998) *J. Biol. Chem.* 273, 13524–30.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.