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NDFIP1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13449c

Product Information

Application	WB, E
Primary Accession	Q9BT67
Other Accession	Q5U2S1, Q8R0W6, NP_085048.1
Reactivity	Human, Rat, Mouse
Predicted	Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32776
Calculated MW	24899
Antigen Region	77-106

Additional Information

Gene ID	80762
Other Names	NEDD4 family-interacting protein 1, Breast cancer-associated protein SGA-1M, NEDD4 WW domain-binding protein 5, Putative MAPK-activating protein PM13, Putative NF-kappa-B-activating protein 164, Putative NFKB and MAPK-activating protein, NDFIP1, N4WBP5
Target/Specificity	This NDFIP1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 77-106 amino acids from the Central region of human NDFIP1.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NDFIP1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NDFIP1

Synonyms	N4WBP5
Function	Activates HECT domain-containing E3 ubiquitin-protein ligases, including NEDD4 and ITCH, and consequently modulates the stability of their targets. As a result, controls many cellular processes. Prevents chronic T-helper cell-mediated inflammation by activating ITCH and thus controlling JUNB degradation (By similarity). Promotes pancreatic beta cell death through degradation of JUNB and inhibition of the unfolded protein response, leading to reduction of insulin secretion (PubMed:26319551). Restricts the production of pro- inflammatory cytokines in effector Th17 T-cells by promoting ITCH-mediated ubiquitination and degradation of RORC (By similarity). Together with NDFIP2, limits the cytokine signaling and expansion of effector Th2 T-cells by promoting degradation of JAK1, probably by ITCH- and NEDD4L-mediated ubiquitination (By similarity). Regulates peripheral T-cell tolerance to self and foreign antigens, forcing the exit of naive CD4+ T-cells from the cell cycle before they become effector T-cells (By similarity). Negatively regulates RLR-mediated antiviral response by promoting SMURF1-mediated ubiquitination and subsequent degradation of MAVS (PubMed:23087404). Negatively regulates KCNH2 potassium channel activity by decreasing its cell-surface expression and interfering with channel maturation through recruitment of NEDD4L to the Golgi apparatus where it mediates KCNH2 degradation (PubMed:26363003). In cortical neurons, mediates the ubiquitination of the divalent metal transporter SLC11A2/DMT1 by NEDD4L, leading to its down-regulation and protection of the cells from cobalt and iron toxicity (PubMed:19706893). Important for normal development of dendrites and dendritic spines in cortex (By similarity). Enhances the ubiquitination of BRAT1 mediated by: NEDD4, NEDD4L and ITCH and is required for the nuclear localization of ubiquitinated BRAT1 (PubMed:25631046). Enhances the ITCH-mediated ubiquitination of MAP3K7 by recruiting E2 ubiquitin-conjugating enzyme UBE2L3 to ITCH (By similarity). Modulates EGFR signaling through multiple pathways. In particular, may regulate the ratio of AKT1-to-MAPK8 signaling in response to EGF, acting on AKT1 probably through PTEN destabilization and on MAPK8 through ITCH-dependent MAP2K4 inactivation. As a result, may control cell growth rate (PubMed:20534535). Inhibits cell proliferation by promoting PTEN nuclear localization and changing its signaling specificity (PubMed:25801959).
Cellular Location	Endosome membrane; Multi-pass membrane protein. Golgi apparatus membrane. Synapse, synaptosome {ECO:0000250|UniProtKB:Q8R0W6}. Cell projection, dendrite {ECO:0000250|UniProtKB:Q5U2S1}. Secreted Note=Detected in exosomes and secreted via the exosomal pathway (PubMed:18819914)
Tissue Location	Widely expressed. Higher levels are detected in cerebellum, pituitary, thalamus, kidney, liver, testis, salivary glands and placenta. Also expressed in fetal brain, kidney and lung

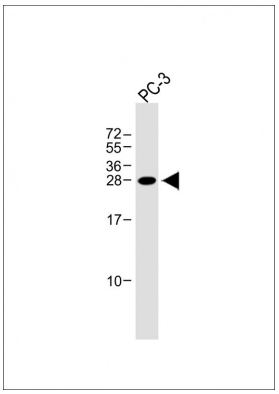
Background

The protein encoded by this gene belongs to a small group of evolutionarily conserved proteins with three transmembrane domains. It is a potential target for ubiquitination by the Nedd4 family of proteins. This protein is thought to be part of a family of integral Golgi membrane proteins.

References

Mund, T., et al. Proc. Natl. Acad. Sci. U.S.A. 107(25):11429-11434(2010) Howitt, J., et al. Proc. Natl. Acad. Sci. U.S.A. 106(36):15489-15494(2009) Rapley, E.A., et al. Nat. Genet. 41(7):807-810(2009) Mund, T., et al. EMBO Rep. 10(5):501-507(2009) Putz, U., et al. J. Biol. Chem. 283(47):32621-32627(2008)

Images



Anti-NDFIP1 Antibody (Center) at 1:1000 dilution + PC-3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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