

Ndfip1 (D-4): sc-398469

BACKGROUND

Nedd4 family interacting protein-1 (NDFIP1), also referred to as N4WBP5, is a member of a family of highly conserved proteins. It has three transmembrane domains in its carboxy terminal and two PY motifs in its amino terminal. NDFIP1 is a 221 amino acid, Golgi-associated protein that may play a role in Golgi structure and function. NDFIP1 binds the WW domains of a number of Nedd4 family members called HECT-type E3 ubiquitin ligases. NDFIP1 is strongly expressed in surviving neurons around a site of injury. This suggests that ubiquitination may be a possible survival strategy and NDFIP1 may act as a neuroprotective protein. NDFIP1 may also have an effect on the function of Itch, another E3 ubiquitin ligase. Expression of NDFIP1 and its association with Itch may be promoted by T cell activation. Mice lacking NDFIP1 exhibit inactivation of Itch and accumulation of JunB causing them to die prematurely with severe skin and lung inflammation.

REFERENCES

1. Harvey, K.F., et al. 2002. N4WBP5, a potential target for ubiquitination by the NEDD4 family of proteins, is a novel Golgi-associated protein. *J. Biol. Chem.* 277: 9307-9317.
2. Donnison, M., et al. 2004. Isolation of genes associated with developmentally competent bovine oocytes and quantitation of their levels during development. *Biol. Reprod.* 71: 1813-1821.
3. Shearwin-Whyatt, L.M., et al. 2004. N4WBP5A (Ndfip2), a NEDD4-interacting protein, localizes to multivesicular bodies and the Golgi, and has a potential role in protein trafficking. *J. Cell Sci.* 117: 3679-3689.
4. Bennett, C.L., et al. 2005. Genetic heterogeneity for autosomal recessive pyridoxine-dependent seizures. *Neurogenetics* 6: 143-149.

CHROMOSOMAL LOCATION

Genetic locus: NDFIP1 (human) mapping to 5q31.3.

SOURCE

Ndfip1 (D-4) is a mouse monoclonal antibody raised against amino acids 1-42 mapping at the N-terminus of Ndfip1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ndfip1 (D-4) is available conjugated to agarose (sc-398469 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398469 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398469 PE), fluorescein (sc-398469 FITC), Alexa Fluor® 488 (sc-398469 AF488), Alexa Fluor® 546 (sc-398469 AF546), Alexa Fluor® 594 (sc-398469 AF594) or Alexa Fluor® 647 (sc-398469 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398469 AF680) or Alexa Fluor® 790 (sc-398469 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Ndfip1 (D-4) is recommended for detection of Ndfip1 of 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 Ndfip1 siRNA (h): sc-75886, Ndfip1 shRNA Plasmid (h): sc-75886-SH and Ndfip1 shRNA (h) Lentiviral Particles: sc-75886-V.

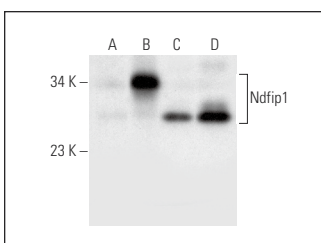
Molecular Weight of Ndfip1: 26 kDa.

Positive Controls: Ndfip1 (h): 293T Lysate: sc-370558, Hep G2 cell lysate: sc-2227 or PC-3 cell lysate: sc-2220.

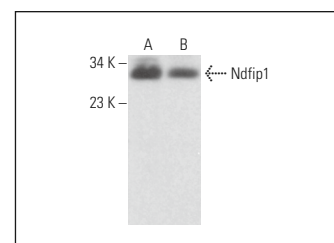
RECOMMENDED SUPPORT REAGENTS

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



Ndfip1 (D-4): sc-398469. Western blot analysis of Ndfip1 expression in non-transfected 293T: sc-117752 (A), human Ndfip1 transfected 293T: sc-370558 (B), Hep G2 (C) and PC-3 (D) whole cell lysates.



Ndfip1 (D-4): sc-398469. Western blot analysis of Ndfip1 expression in Hep G2 (A) and Jurkat (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Gorla, M., et al. 2019. Ndfip proteins target robo receptors for degradation and allow commissural axons to cross the midline in the developing spinal cord. *Cell Rep.* 26: 3298-3312.e4.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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