

NUBP1 (H-4): sc-398991

BACKGROUND

NUBP1 (nucleotide binding protein 1), also known as cytosolic Fe-S cluster assembly factor NUBP1 or Nbp35, is a 320 amino acid protein involved in the regulation of centrosome duplication. A member of the Mrp/NBP35 ATP-binding protein family and the NUBP1/NBP35 subfamily, NUBP1 exists as two alternatively spliced isoforms and is known to interact with KIFC1 and NUBP2. NUBP1 is a component of the cytosolic iron-sulfur (Fe/S) protein assembly machinery and can transfer iron-sulfur clusters to certain apoproteins. The gene encoding NUBP1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

- Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. *Clin. Genet.* 23: 318-320.
- Shahrestanifar, M., et al. 1994. Cloning of a human cDNA encoding a putative nucleotide-binding protein related to *Escherichia coli* MinD. *Gene* 147: 281-285.
- Nakashima, H., et al. 1999. Two novel mouse genes—Nubp2, mapped to the t-complex on chromosome 17, and Nubp1, mapped to chromosome 16—establish a new gene family of nucleotide-binding proteins in eukaryotes. *Genomics* 60: 152-160.
- Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. *Nat. Genet.* 26: 370-374.
- Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. *Hum. Mol. Genet.* 13: R161-R168.
- Hausmann, A., et al. 2005. The eukaryotic P loop NTPase Nbp35: an essential component of the cytosolic and nuclear iron-sulfur protein assembly machinery. *Proc. Natl. Acad. Sci. USA* 102: 3266-3271.
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CHROMOSOMAL LOCATION

Genetic locus: NUBP1 (human) mapping to 16p13.13.

SOURCE

NUBP1 (H-4) is a mouse monoclonal antibody raised against amino acids 269-320 mapping at the N-terminus of NUBP1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

NUBP1 (H-4) is recommended for detection of NUBP1 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 NUBP1 siRNA (h): sc-93202, NUBP1 shRNA Plasmid (h): sc-93202-SH and NUBP1 shRNA (h) Lentiviral Particles: sc-93202-V.

Molecular Weight of NUBP1: 35 kDa.

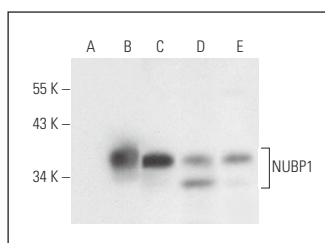
Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or NUBP1 (h): 293T Lysate: sc-111713.

RECOMMENDED SUPPORT REAGENTS

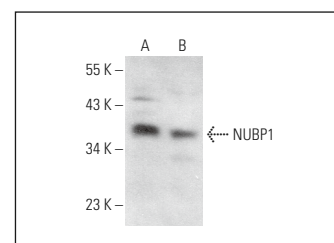
To ensure optimal results, the following support reagents are recommended:

- 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



NUBP1 (H-4): sc-398991. Western blot analysis of NUBP1 expression in non-transfected 293T: sc-117752 (A), human NUBP1 transfected 293T: sc-111713 (B), HeLa (C), COLO 320DM (D) and Jurkat (E) whole cell lysates.



NUBP1 (H-4): sc-398991. Western blot analysis of NUBP1 expression in HeLa (A) and SW480 (B) whole cell lysates.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.