

NUBP1 (h): 293T Lysate: sc-111713

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.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 600280. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Stehling, O., et al. 2008. Human NBP35 is essential for both cytosolic iron-sulfur protein assembly and iron homeostasis. *Mol. Cell. Biol.* 28: 5517-5528.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

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

PRODUCT

NUBP1 (h): 293T Lysate represents a lysate of human NUBP1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NUBP1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NUBP1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

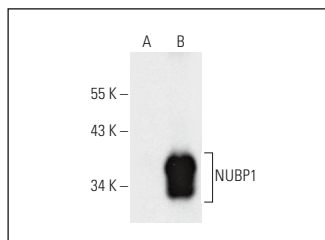
NUBP1 (C-7): sc-514175 is recommended as a positive control antibody for Western Blot analysis of enhanced human NUBP1 expression in NUBP1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

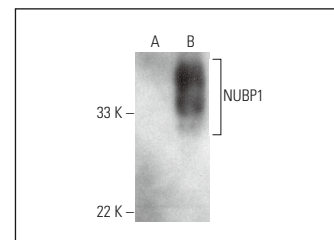
To ensure optimal results, the following support reagents are recommended:

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.

DATA



NUBP1 (C-7): sc-514175. Western blot analysis of NUBP1 expression in non-transfected: sc-117752 (A), human NUBP1 transfected: sc-111713 (B) 293T whole cell lysates.



NUBP1 (C-3) HRP: sc-398368 HRP. Direct western blot analysis of NUBP1 expression in non-transfected: sc-117752 (A) and human NUBP1 transfected: sc-111713 (B) 293T whole cell lysates.

RESEARCH USE

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