SANTA CRUZ BIOTECHNOLOGY, INC.

NUBP1 (C-7): sc-514175

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. 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.
3. 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.
4. 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.

CHROMOSOMAL LOCATION

Genetic locus: NUBP1 (human) mapping to 16p13.13; Nubp1 (mouse) mapping to 16 A1.

SOURCE

NUBP1 (C-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 281-299 near the C-terminus of NUBP1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514175 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

NUBP1 (C-7) is recommended for detection of NUBP1 of mouse, rat and 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 siRNA (m): sc-150090, NUBP1 shRNA Plasmid (h): sc-93202-SH, NUBP1 shRNA Plasmid (m): sc-150090-SH, NUBP1 shRNA (h) Lentiviral Particles: sc-93202-V and NUBP1 shRNA (m) Lentiviral Particles: sc-150090-V.

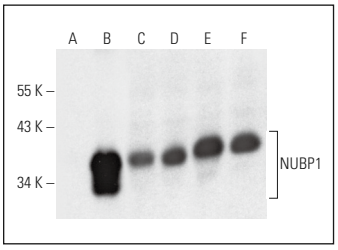
Molecular Weight of NUBP1: 35 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, RT-4 whole cell lysate: sc-364257 or NUBP1 (h): 293T Lysate: sc-111713.

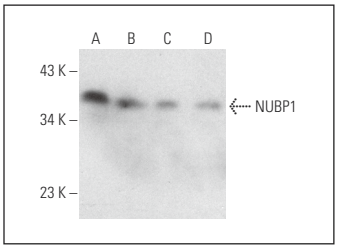
RECOMMENDED SUPPORT REAGENTS

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 (C-7): sc-514175. Western blot analysis of NUBP1 expression in non-transfected 293T: sc-117752 (**A**), human NUBP1 transfected 293T: sc-111713 (**B**), Jurkat (**C**), HeLa (**D**), COLO 320DM (**E**) and RT-4 (**F**) whole cell lysates.



NUBP1 (C-7): sc-514175. Western blot analysis of NUBP1 expression in NIH/3T3 (**A**), KNRK (**B**), RAW 264.7 (**C**) and PC-12 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fan, X., et al. 2022. Iron-regulated assembly of the cytosolic iron-sulfur cluster biogenesis machinery. J. Biol. Chem. 298: 102094.

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.