

# NUFIP1 (2662C1a): sc-81567

## BACKGROUND

NUFIP1 (nuclear fragile X mental retardation-interacting protein 1) is a 495 amino acid protein that localizes to the nucleus and can interact with FMR1 (fragile X mental retardation protein) and BRCA1, a breast and ovarian-specific tumor suppressor. Through its interaction with FMR1, NUFIP1 is thought to shuttle specific mRNPs to active neuronal synapses, thereby regulating the translation of synaptic plasticity-related mRNA. The close interaction of NUFIP1 with FMR1, a protein that is essential for proper dendritic spine maturation, suggests close involvement in neuronal development. Interaction of NUFIP1 with BRCA1 results in the formation of a complex which binds the positive elongation factor P-TEF $\beta$ , thus stimulating RNA polymerase II (pol II) transcription. When associated with BRAC1, NUFIP1 acts as a transcriptional activator contributing to tumor suppressor gene expression. NUFIP1 contains one C<sub>2</sub>H<sub>2</sub>-type zinc finger and is expressed throughout the body.

## REFERENCES

1. Bardoni, B., et al. 2000. A novel RNA-binding nuclear protein that interacts with the fragile X mental retardation (FMR1) protein. *Hum. Mol. Genet.* 8: 2557-2566.
2. Bardoni, B., et al. 2000. Assignment of NUFIP1 (nuclear FMRP interacting protein 1) gene to chromosome 13q14 and assignment of a pseudogene to chromosome 6q12. *Cytogenet. Cell Genet.* 89: 11-13.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604354. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Bardoni, B., et al. 2003. NUFIP1 (nuclear FMRP interacting protein 1) is a nucleocytoplasmic shuttling protein associated with active synaptosomes. *Exp. Cell Res.* 289: 95-107.
5. Cabart, P., et al. 2004. BRCA1 cooperates with NUFIP and P-TEFb to activate transcription by RNA polymerase II. *Oncogene* 23: 5316-5329.
6. McKeegan, K.S., et al. 2007. A dynamic scaffold of pre-snoRNP factors facilitates human box C/D snoRNP assembly. *Mol. Cell. Biol.* 27: 6782-6793.

## CHROMOSOMAL LOCATION

Genetic locus: NUFIP1 (human) mapping to 13q14.12.

## SOURCE

NUFIP1 (2662C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the N-terminus of NUFIP1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## STORAGE

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

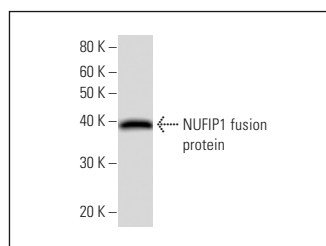
## APPLICATIONS

NUFIP1 (2662C1a) is recommended for detection of NUFIP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for NUFIP1 siRNA (h): sc-105367, NUFIP1 shRNA Plasmid (h): sc-105367-SH and NUFIP1 shRNA (h) Lentiviral Particles: sc-105367-V.

Molecular Weight of NUFIP1: 70 kDa.

## DATA



NUFIP1 (2662C1a): sc-81567. Western Blot analysis of human recombinant NUFIP1 fusion protein.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.