

# nucleobindin (C-18): sc-69302

## BACKGROUND

Nucleobindin, also designated NUC or CALNUC, is a secreted protein that promotes production of DNA-specific antibodies in lupus-prone MRL/LPR mice. Nucleobindin contains a signal peptide, two EF-hand motifs, acidic and basic regions and a leucine-zipper motif. Nucleobindin has two calcium-binding domains and is the major Golgi Ca<sup>2+</sup> binding protein. The leucine zipper structure and the basic amino acid-rich region are responsible for DNA binding. Nucleobindin preferentially associates with membranes of polarized cells. Nucleobindin is found in both the cytosol and the membrane and is localized to *cis*-Golgi cisternae and the *cis*-Golgi network (CGN). Nucleobindin is involved in autoimmunity, apoptosis and calcium homeostasis in the bone matrix.

## REFERENCES

1. Miura, K., et al. 1992. Molecular cloning of nucleobindin, a novel DNA-binding protein that contains both a signal peptide and a leucine zipper structure. *Biochem. Biophys. Res. Commun.* 187: 375-380.
2. Miura, K., et al. 1996. Organization of the human gene for nucleobindin (NUC) and its chromosomal assignment to 19q13.2-q13.4. *Genomics* 34: 181-186.
3. Kubota, T., et al. 1998. Upregulation of nucleobindin expression in human-activated lymphocytes and non-Hodgkin's lymphoma. *Pathol. Int.* 48: 22-28.
4. Lin, P., et al. 1998. The mammalian calcium-binding protein, nucleobindin (CALNUC), is a Golgi resident protein. *J. Cell Biol.* 141: 1515-1527.

## CHROMOSOMAL LOCATION

Genetic locus: NUCB1 (human) mapping to 19q13.33.

## SOURCE

nucleobindin (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of nucleobindin of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69302 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## PROTOCOLS

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

## APPLICATIONS

nucleobindin (C-18) is recommended for detection of nucleobindin of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

nucleobindin (C-18) is also recommended for detection of nucleobindin in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for nucleobindin siRNA (h): sc-40778, nucleobindin shRNA Plasmid (h): sc-40778-SH and nucleobindin shRNA (h) Lentiviral Particles: sc-40778-V.

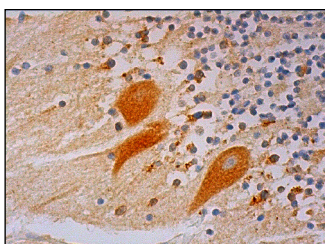
Molecular Weight of nucleobindin: 55 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or MIA PaCa-2 cell lysate: sc-2285.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



nucleobindin (C-18): sc-69302. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebellum tissue showing cytoplasmic staining of Purkinje cells and cells in molecular layer.

## RESEARCH USE

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

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Try **nucleobindin (R-Y2): sc-100793** or **nucleobindin (4H9): sc-133851**, our highly recommended monoclonal alternatives to nucleobindin (C-18).