

nucleobindin 2 (U-23): sc-133853

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 Ca²⁺ 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.
5. Fialka, I., et al. 1999. Loss of epithelial polarity is accompanied by differential association of proteins with intracellular membranes. *Electrophoresis* 20: 331-343.
6. Lin, P., et al. 1999. Overexpression of CALNUC (nucleobindin) increases agonist and Thapsigargin releasable Ca²⁺ storage in the Golgi. *J. Cell Biol.* 145: 279-289.
7. Kawano, J., et al. 2000. CALNUC (nucleobindin) is localized in the Golgi apparatus in insect cells. *Eur. J. Cell Biol.* 79: 208-217.

CHROMOSOMAL LOCATION

Genetic locus: NUCB2 (human) mapping to 11p15.1.

SOURCE

nucleobindin 2 (U-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic nucleobindin 2 peptide of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

STORAGE

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

APPLICATIONS

nucleobindin 2 (U-23) is recommended for detection of nucleobindin 2 of human origin by Western Blotting (starting dilution 1:200, 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), 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).

Suitable for use as control antibody for nucleobindin 2 siRNA (h): sc-62705, nucleobindin 2 shRNA Plasmid (h): sc-62705-SH and nucleobindin 2 shRNA (h) Lentiviral Particles: sc-62705-V.

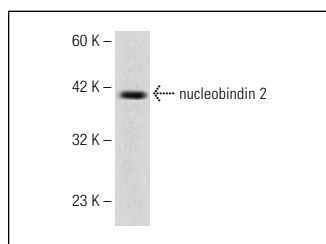
Molecular Weight of nucleobindin 2: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

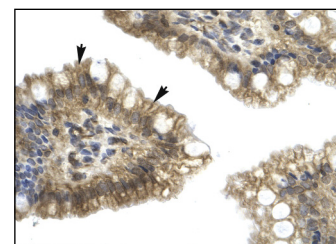
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



nucleobindin 2 (U-23): sc-133853. Western blot analysis of nucleobindin 2 expression in Hep G2 whole cell lysate.



nucleobindin 2 (U-23): sc-133853. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human intestine tissue showing cytoplasmic localization.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **nucleobindin 2 (D-10): sc-376947**, our highly recommended monoclonal alternative to nucleobindin 2 (U-23).