SANTA CRUZ BIOTECHNOLOGY, INC.

Nucleostemin (M-270): sc-67013

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Nucleostemin, also designated nucleolar GTP-binding protein 3, is a member of the MMR1/HSR1 GTP-binding protein family. It is expressed in the nucleoli of adult CNS stem cells, primitive bone marrow cells, embryonic stem cells and in several cancer cell lines. Nucleostemin is often used as a stem cell marker. Overexpression or depletion of the protein can reduce cell proliferation in CNS stem cells. Nucleostemin shuttles between the nucleus and the nucleolus and may be important in maintaining the proliferative capacity of stem cells. Nucleostemin is important in the growth regulation of liver cancer, gastric cancer and several other cancer types. The gene encoding Nucleostemin is localized to chromosome 3p21.1.

REFERENCES

1. Charpentier, A.H., et al. 2000. Effects of estrogen on global gene expression: identification of novel targets of estrogen action. Cancer Res. 60: 5977-5983.
2. Normile, D. 2002. Cell proliferation. Common control for cancer, stem cells. Science 298: 1869.
3. Tsai, R.Y. and McKay, R.D. 2002. A nucleolar mechanism controlling cell proliferation in stem cells and cancer cells. Genes Dev. 16: 2991-3003.

CHROMOSOMAL LOCATION

Genetic locus: GNL3 (human) mapping to 3p21.1; Gnl3 (mouse) mapping to 14 B.

SOURCE

Nucleostemin (M-270) is a rabbit polyclonal antibody raised against amino acids 269-538 mapping at the C-terminus of Nucleostemin of mouse origin.

PRODUCT

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

APPLICATIONS

Nucleostemin (M-270) is recommended for detection of Nucleostemin of mouse, rat and, to a lesser extent, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Nucleostemin siRNA (h): sc-45830, Nucleostemin siRNA (m): sc-45831, Nucleostemin shRNA Plasmid (h): sc-45830-SH, Nucleostemin shRNA Plasmid (m): sc-45831-SH, Nucleostemin shRNA (h) Lentiviral Particles: sc-45830-V and Nucleostemin shRNA (m) Lentiviral Particles: sc-45831-V.

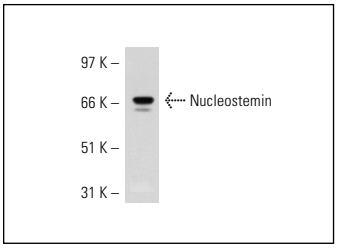
Molecular Weight of Nucleostemin: 62 kDa.

Positive Controls: LADMAC whole cell lysate, Hep G2 cell lysate: sc-2227 or K-562 nuclear extract: sc-2130.

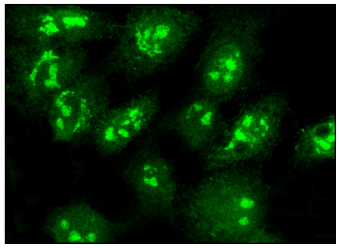
RECOMMENDED SECONDARY REAGENTS

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.

DATA



Nucleostemin (M-270): sc-67013. Western blot analysis of Nucleostemin expression in LADMAC whole cell lysate.



Nucleostemin (M-270): sc-67013. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nucleolar localization.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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