SANTA CRUZ BIOTECHNOLOGY, INC.

B23 (H-106): sc-5564

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transport of proteins across the nuclear envelope is a selective, multi-step process involving several cytoplasmic factors. Proteins must be recognized as import substrates, dock at the nuclear pore complex, and translocate across the nuclear envelope in an ATP-dependent fashion. Several cytosolic and nuclear proteins that are central to this process have been identified. For example, two cytosolic factors critically involved in the recognition and docking process are the karyopherin α and karyopherin β proteins. The karyopherin holoenzyme is a heterodimer of α and β subunits. The nuclear protein B23 (also referred to as nucleophosmin) is involved in ribosomal assembly and rRNA transport. B23 is an abundant protein that is highly phosphorylated by Cdc2 kinase during mitosis.

CHROMOSOMAL LOCATION

Genetic locus: NPM1 (human) mapping to 5q35.1; Npm1 (mouse) mapping to 11 A4.

SOURCE

B23 (H-106) is a rabbit polyclonal antibody raised against amino acids 174-280 of B23 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.

APPLICATIONS

B23 (H-106) is recommended for detection of B23 of mouse, rat and 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).

B23 (H-106) is also recommended for detection of B23 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for B23 siRNA (h): sc-29771, B23 siRNA (m): sc-29772, B23 shRNA Plasmid (h): sc-29771-SH, B23 shRNA Plasmid (m): sc-29772-SH, B23 shRNA (h) Lentiviral Particles: sc-29771-V and B23 shRNA (m) Lentiviral Particles: sc-29772-V.

Molecular Weight of B23: 40 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, CCRF-CEM cell lysate: sc-2225 or HeLa whole cell lysate: sc-2200.

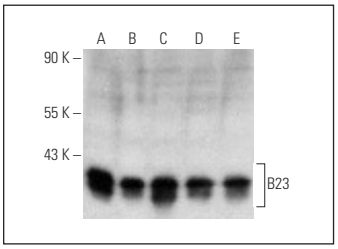
STORAGE

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

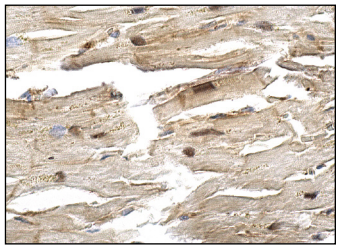
RESEARCH USE

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

DATA



B23 (H-106): sc-5564. Western blot analysis of B23 expression in HEL 92.1.7 (**A**), CCRF-CEM (**B**), HeLa (**C**), K-562 (**D**) and DU 145 (**E**) whole cell lysates.



B23 (H-106): sc-5564. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing nuclear and cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

1. Crockett, D.K., et al. 2004. Identification of NPM-ALK interacting proteins by tandem mass spectrometry. Oncogene 23: 2617-2629.
2. Zhang, S., et al. 2004. Nucleolar localization of the human telomeric repeat binding factor 2 (TRF2). J. Cell Sci. 117: 3935-3945.
3. Zhu, X., et al. 2007. A facilitated tracking and transcription mechanism of long-range enhancer function. Nucleic Acids Res. 35: 5532-5544.
4. Lu, L., et al. 2008. Immunoprecipitation alert: DNA binding proteins directly bind to protein A/G without any antibody as the bridge. Cell Cycle 7: 417-418.
5. Chen, D., et al. 2010. Transcription-independent ARF regulation in oncogenic stress-mediated p53 responses. Nature 464: 624-627.
6. Tong, W.Y., et al. 2010. Biochemical characterization of the cell-biomaterial interface by quantitative proteomics. Mol. Cell. Proteomics 9: 2089-2098.
7. Chiu, W.C., et al. 2010. Oxidative stress enhances AP-1 and NFκB-mediated regulation of β_2-glycoprotein I gene expression in hepatoma cells. J. Cell. Biochem. 111: 988-998.
8. Wang, T.M., et al. 2011. Docosahexaenoic acid attenuates VCAM-1 expression and NFκB activation in TNF-α-treated human aortic endothelial cells. J. Nutr. Biochem. 22: 187-194.
9. Rokudai, S., et al. 2013. MOZ increases p53 acetylation and premature senescence through its complex formation with PML. Proc. Natl. Acad. Sci. USA 110: 3895-3900.