

B23 (7H10B9): sc-65943

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.

REFERENCES

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- Moroianu, J., et al. 1996. The binding site of karyopherin α for karyopherin β overlaps with a nuclear localization sequence. *Proc. Natl. Acad. Sci. USA* 93: 6572-6576.
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- Nozawa, Y., et al. 1996. Expression of nucleophosmin/B23 in normal and neoplastic colorectal mucosa. *J. Pathol.* 178: 48-52.
- Lu, Y.Y., et al. 1996. Decreased accumulation and desphosphorylation of the mitosis-specific form of nucleophosmin/B23 in staurosporine-induced chromosome decondensation. *Biochem. J.* 317: 321-327.

CHROMOSOMAL LOCATION

Genetic locus: NPM1 (human) mapping to 5q35.1.

SOURCE

B23 (7H10B9) is a mouse monoclonal antibody raised against recombinant B23 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

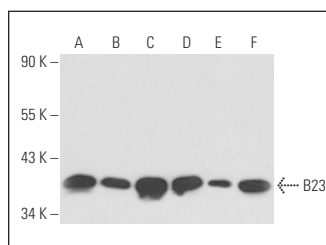
B23 (7H10B9) is recommended for detection of B23 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

Molecular Weight of B23: 40 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, HeLa whole cell lysate: sc-2200 or MCF7 whole cell lysate: sc-2206.

DATA



B23 (7H10B9): sc-65943. Western blot analysis of B23 expression in HEL 92.1.7 (A), DU 145 (B), HeLa (C), K-562 (D), CCRF-CEM (E) and MCF7 (F) whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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



See **B23 (E-3): sc-271737** for B23 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor[®] 488, 546, 594, 647, 680 and 790.