

YB-1 (h5): 293T Lysate: sc-117138

BACKGROUND

Y-Box binding protein YB-1, also known as CCAAT-binding transcription factor, enhancer factor I subunit A and DNA-binding protein B, belongs to a family of multifunctional proteins which regulate both transcription and translation. Y-box proteins interact with a wide variety of nucleic acid structures to act as transcription factors and mRNA masking proteins. The modular structure of Y-box proteins includes a highly conserved N-terminal cold-shock domain (CSD, equivalent to the bacterial cold-shock proteins) and four basic C-terminal domains containing arginine clusters and aromatic residues. YB-1 plays a role in cell proliferation as an activator of growth-associated gene expression. YB-1 is also a repressor of the cell death-associated gene FAS. YB-1 may play an important role in controlling cell survival by regulating the expression of cell growth-associated and death-associated genes.

REFERENCES

1. Okamoto, T., et al. 2000. Direct interaction of p53 with the Y-box binding protein, YB-1: a mechanism for regulation of human gene expression. *Oncogene* 54: 6194-6202.
2. Levenson, V.V., et al. 2000. Pleiotropic resistance to DNA-interactive drugs is associated with increased expression of genes involved in DNA replication, repair, and stress response. *Cancer Res.* 18: 5027-5030.
3. Wang, N., et al. 2000. Acquisition of double-stranded DNA-binding ability in a hybrid protein between *Escherichia coli* CspA and the cold shock domain of human YB-1. *Mol. Microbiol.* 3: 526-534.
4. Lasham, A., et al. 2000. Regulation of the human FAS promoter by YB-1, Puralpha and AP-1 transcription factors. *Gene* 1-2: 1-13.
5. Diamond, P., et al. 2001. Cold shock domain factors activate the granulocyte-macrophage colony-stimulating factor promoter in stimulated Jurkat T cells. *J. Biol. Chem.* 11: 7943-7951.
6. Chansky, H.A., et al. 2001. Oncogenic TLS/ERG and EWS/Fli-1 fusion proteins inhibit RNA splicing mediated by YB-1 protein. *Cancer Res.* 9: 3586-3590.

CHROMOSOMAL LOCATION

Genetic locus: YBX1 (human) mapping to 1p34.2.

PRODUCT

YB-1 (h5): 293T Lysate represents a lysate of human YB-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

YB-1 (h5): 293T Lysate is suitable as a Western Blotting positive control for human reactive YB-1 antibodies. Recommended use: 10-20 µl per lane.

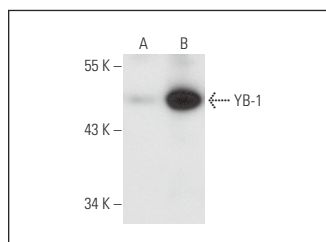
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

YB-1 (59-Q): sc-101198 is recommended as a positive control antibody for Western Blot analysis of enhanced human YB-1 expression in YB-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



YB-1 (59-Q): sc-101198. Western blot analysis of YB-1 expression in non-transfected: sc-117752 (A) and human YB-1 transfected: sc-117138 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.