SANTA CRUZ BIOTECHNOLOGY, INC.

SLBP (H-160): sc-292283

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Replication-dependent histone mRNAs lack polyadenylated tails and instead end in a conserved stem-loop. The stem-loop binding protein (SLBP) binds the 3' end of histone mRNA and contains a 73 amino acid RNA-binding domain. SLBP mediates the interaction of the histone pre-mRNA with U7 SnRNP to facilitate 3' end processing. SLBP is required for the translation of stem-loop mRNAs. SLBP forms a stable complex with U7 SnRNP in the nucleus as well as the cytoplasm. hZFP100 is a zinc finger protein that interacts with the SLBP/RNA complex but not with free SLBP. During the cell cycle, SLBP increases in the late G_1 and decreases in the S/G_2 border. The regulation of SLBP occurs at the level of translation. Specifically, two phosphorylation events on threonine 99 and threonine 104 trigger the degradation of SLBP in late S phase cells.

REFERENCES

1. Wang, Z.F., et al. 1996. The protein that binds the 3' end of histone mRNA: a novel RNA-binding protein required for histone pre-mRNA processing. Genes Dev. 10: 3028-3040.
2. Martin, F., et al. 1997. The gene for histone RNA hairpin binding protein is located on human chromosome 4 and encodes a novel type of RNA binding protein. EMBO J. 16: 769-778.
3. Dominski, Z., et al. 1999. Stem-loop binding protein facilitates 3'-end formation by stabilizing U7 SnRNP binding to histone pre-mRNA. Mol. Cell. Biol. 19: 3561-3570.
4. Whitfield, M.L., et al. 2000. Stem-loop binding protein, the protein that binds the 3' end of histone mRNA, is cell cycle regulated by both translational and posttranslational mechanisms. Mol. Cell. Biol. 20: 4188-4198.
5. Ling, J., et al. 2002. The histone 3'-terminal stem-loop binding protein enhances translation through a functional and physical interaction with eukaryotic initiation factor 4G (eIF4G) and eIF3. Mol. Cell. Biol. 22: 7853-7867.

CHROMOSOMAL LOCATION

Genetic locus: SLBP (human) mapping to 4p16.3; Slbp (mouse) mapping to 5 B2.

SOURCE

SLBP (H-160) is a rabbit polyclonal antibody raised against amino acids 56-215 mapping within an internal region of SLBP 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-292283 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

SLBP (H-160) is recommended for detection of SLBP 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).

SLBP (H-160) is also recommended for detection of SLBP in additional species, including equine, canine, bovine and porcine.

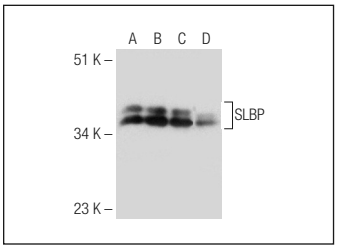
Suitable for use as control antibody for SLBP siRNA (h): sc-38321, SLBP siRNA (m): sc-38322, SLBP shRNA Plasmid (h): sc-38321-SH, SLBP shRNA Plasmid (m): sc-38322-SH, SLBP shRNA (h) Lentiviral Particles: sc-38321-V and SLBP shRNA (m) Lentiviral Particles: sc-38322-V.

SLBP (H-160) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

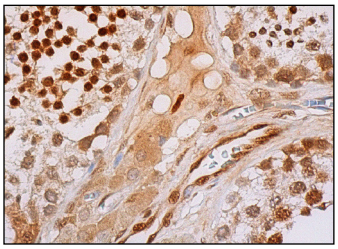
Molecular Weight of SLBP: 31 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or Hep G2 nuclear extract: sc-364819.

DATA



SLBP (H-160): sc-292283. Western blot analysis of SLBP expression in Jurkat (**A**), HeLa (**B**) and Hep G2 (**C**) nuclear extracts and mouse lymph node tissue extract (**D**).



SLBP (H-160): sc-292283. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and Leydig cells.

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.

MONOS Satisfaction Guaranteed

Try **SLBP (H-3): sc-376310** or **SLBP (H-10): sc-390833**, our highly recommended monoclonal alternatives to SLBP (H-160).