

SLBP (H-3): sc-376310

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 G₁ and decreases in the S/G₂ 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.

CHROMOSOMAL LOCATION

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

SOURCE

SLBP (H-3) is a mouse monoclonal antibody raised against amino acids 56-215 mapping within an internal region of SLBP of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain 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-376310 X, 200 µg/0.1 ml.

SLBP (H-3) is available conjugated to agarose (sc-376310 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376310 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376310 PE), fluorescein (sc-376310 FITC), Alexa Fluor® 488 (sc-376310 AF488), Alexa Fluor® 546 (sc-376310 AF546), Alexa Fluor® 594 (sc-376310 AF594) or Alexa Fluor® 647 (sc-376310 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376310 AF680) or Alexa Fluor® 790 (sc-376310 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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-3) is recommended for detection of SLBP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

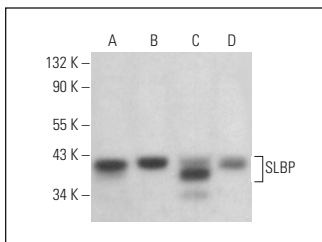
Molecular Weight of SLBP: 31 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795, 3T3-L1 cell lysate: sc-2243 or RPE-J cell lysate: sc-24771.

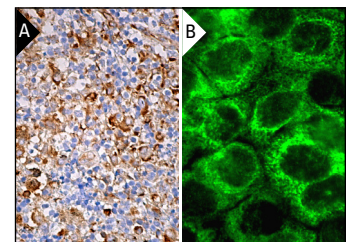
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SLBP (H-3): sc-376310. Western blot analysis of SLBP expression in SP2/0 (A), 3T3-L1 (B), RPE-J (C) and PC-3 (D) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



SLBP (H-3): sc-376310. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic staining of cells in non-germinal center (A). Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic localization (B).

RESEARCH USE

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