

# Produktinformation



Forschungsprodukte & Biochemikalien
Zellkultur & Verbrauchsmaterial
Diagnostik & molekulare Diagnostik
Laborgeräte & Service

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## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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#### SANTA CRUZ BIOTECHNOLOGY, INC.

## SLBP (m): 293T Lysate: sc-123576



#### 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<sub>1</sub> and decreases in the S/G<sub>2</sub> 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

- Wang, Z.F., Whitfield, M.L., Ingledue, T.C. 3rd, Dominski, Z. and Marzluff, W.F. 1996. The protein that binds the 3' end of histone mRNA: a novel RNAbinding protein required for histone pre-mRNA processing. Genes Dev. 10: 3028-3040.
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- Dominski, Z., Zheng, L.X., Sanchez, R. and Marzluff, W.F. 1999. Stem-loop binding protein facilitates 3'-end formation by stabilizing U7 snRNP binding to histone pre-mRNA. Mol. Cell. Biol. 19: 3561-3570.
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- Ling, J., Morley, S.J., Pain, V.M., Marzluff, W.F. and Gallie, D.R. 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.
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- Zheng, L., Dominski, Z., Yang, X.C., Elms, P., Raska, C.S., Borchers, C.H. and Marzluff, W.F. 2003. Phosphorylation of stem-loop binding protein (SLBP) on two threonines triggers degradation of SLBP, the sole cell cycle-regulated factor required for regulation of histone mRNA processing, at the end of S phase. Mol. Cell. Biol. 23: 1590-1601.

#### CHROMOSOMAL LOCATION

Genetic locus: Slbp (mouse) mapping to 5 B2.

#### PRODUCT

SLBP (m): 293T Lysate represents a lysate of mouse SLBP transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

#### APPLICATIONS

SLBP (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive SLBP antibodies. Recommended use: 10-20  $\mu l$  per lane.

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

SLBP (XX-3): sc-101140 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse SLBP expression in SLBP 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-lgGκ BP-HRP: sc-516102 or m-lgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### DATA



SLBP (XX-3): sc-101140. Western blot analysis of SLBP expression in non-transfected: sc-117752 (**A**) and mouse SLBP transfected: sc-123576 (**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.