# SLU7 (h): 293 Lysate: sc-111150



The Power to Question

#### **BACKGROUND**

In order to produce correctly spliced messenger RNA, two catalytic splicing steps are required. After catalytic step I, a major remodeling of the spliceosome occurs to establish the active site for step II. During the second step of mRNA splicing, exon 1 attacks an adenine-guanine (AG) dinucleotide at the 3' splice site. SLU7, the human homolog of the yeast step II splice factor SLU7, is required for selection of the correct AG. Human SLU7 associates with the spliceosome late in the splicing pathway prior to recognition of the 3' splice site for step II. SLU7 depletion in HeLa nuclear extract reveals that SLU7 is required to hold exon 1 tightly within the spliceosome for attack on a prespecified AG.

#### **REFERENCES**

- 1. Frank, D. and Guthrie, C. 1992. An essential splicing factor, SLU7, mediates 3' splice site choice in yeast. Genes Dev. 6: 2112-2124.
- Ansari, A. and Schwer, B. 1995. SLU7 and a novel activity, SSF1, act during the PRP16-dependent step of yeast pre-mRNA splicing. EMBO J. 14: 4001-4009.
- Brys, A. and Schwer, B. 1996. Requirement for SLU7 in yeast pre-mRNA splicing is dictated by the distance between the branchpoint and the 3' splice site. RNA 2: 707-717.
- Zhang, X. and Schwer, B. 1997. Functional and physical interaction between the yeast splicing factors SLU7 and PRP18. Nucleic Acids Res. 25: 2146-2152.
- Staley, J.P. and Guthrie, C. 1998. Mechanical devices of the spliceosome: motors, clocks, springs, and things. Cell 92: 315-326.
- 6. Chua, K. and Reed, R. 1999. The RNA splicing factor hSLU7 is required for correct 3' splice-site choice. Nature 402: 207-210.
- Chua, K. and Reed, R. 1999. Human step II splicing factor hSLU7 functions in restructuring the spliceosome between the catalytic steps of splicing. Genes Dev. 13: 841-850.
- James, S.A., Turner, W. and Schwer, B. 2002. How SLU7 and PRP18 cooperate in the second step of yeast pre-mRNA splicing. RNA 8: 1068-1077.
- Aronova, A., Bacíková, D., Crotti, L.B., Horowitz, D.S. and Schwer, B. 2007. Functional interactions between PRP8, PRP18, SLU7, and U5 snRNA during the second step of pre-mRNA splicing. RNA 13: 1437-1444.

#### **CHROMOSOMAL LOCATION**

Genetic locus: SLU7 (human) mapping to 5q33.3.

#### **PRODUCT**

SLU7 (h): 293 Lysate represents a lysate of human SLU7 transfected 293 cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## **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.

#### **APPLICATIONS**

SLU7 (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive SLU7 antibodies. Recommended use: 10-20 µl per lane.

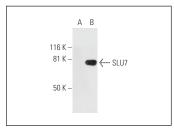
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

SLU7 (G-3): sc-393664 is recommended as a positive control antibody for Western Blot analysis of enhanced human SLU7 expression in SLU7 transfected 293 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-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### **DATA**



SLU7 (G-3): sc-393664. Western blot analysis of SLU7 expression in non-transfected: sc-110760 (**A**) and human SLU7 transfected: sc-111150 (**B**) 293 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.