SANTA CRUZ BIOTECHNOLOGY, INC.

SSRP1 (10D7): sc-56781

BACKGROUND

Expression of protein-coding genes requires the association of specific transcription factors, RNA polymerase and various accessory factors. These accessory factors are distinguished as either histone acetyltransferases or ATP-dependent chromatin-remodeling enzymes, which include FACT (for facilitates chromatin transcription), and they facilitate transcription initiation on DNA packaged into chromatin. FACT is a chromatin-specific elongation factor required for transcription of chromatin templates, and it specifically interacts with nucleosomes and Histone H2A/H2B dimers to promote nucleosome disassembly upon transcription. FACT represents a complex between SPT16, a homolog of the *Saccharomyces cerevisiae* Spt16/Cdc68 protein, and the high-mobility group (HMG)-1-like protein structure-specific recognition protein-1 (SSRP-1). Similar to other HMG domain containing proteins, which are characterized by their ability to bend target DNAs, SSRP1 and the murine ortholog T160 physically interact with serum response factors (SRF) and function as a positive co-regulatory proteins involved in modulating SRF-dependent gene expression.

REFERENCES

1. Felsenfeld, G. 1992. Chromatin as an essential part of the transcriptional mechanism. Nature 355: 219-224.
2. Wittmeyer, J. and Formosa, T. 1997. The *Saccharomyces cerevisiae* DNA polymerase α catalytic subunit interacts with Cdc68/Spt16 and with Pob3, a protein similar to an HMG1-like protein. Mol. Cell. Biol. 17: 4178-4190.
3. Shilatifard, A. 1998. Factors regulating the transcriptional elongation activity of RNA polymerase II. FASEB J. 12: 1437-1446.
4. Orphanides, G., et al. 1998. FACT, a factor that facilitates transcript elongation through nucleosomes. Cell 92: 105-116.
5. LeRoy, G., et al. 1998. Requirement of RSF and FACT for transcription of chromatin templates *in vitro*. Science 282: 1900-1904.
6. Dyer, M.A., et al. 1998. The HMG domain protein SSRP1/PREIIBF is involved in activation of the human embryonic-like globin gene. Mol. Cell. Biol. 18: 2617-2628.
7. Orphanides, G., et al. 1999. The chromatin-specific transcription elongation factor FACT comprises human SPT16 and SSRP1 proteins. Nature 400: 284-288.

CHROMOSOMAL LOCATION

Genetic locus: SSRP1 (human) mapping to 11q12.1.

SOURCE

SSRP1 (10D7) is a mouse monoclonal antibody raised against recombinant SSRP1 fragment of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

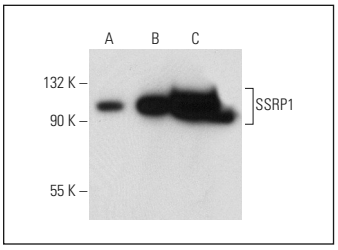
SSRP1 (10D7) is recommended for detection of SSRP1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for SSRP1 siRNA (h): sc-37877, SSRP1 shRNA Plasmid (h): sc-37877-SH and SSRP1 shRNA (h) Lentiviral Particles: sc-37877-V.

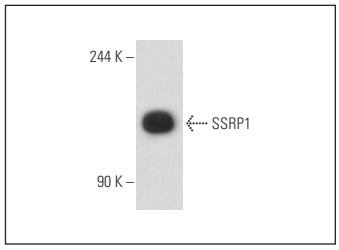
Molecular Weight of SSRP1: 81 kDa.

Positive Controls: SSRP1 (h): 293T Lysate: sc-171570, HeLa whole cell lysate: sc-2200 or K-562 nuclear extract: sc-2130

DATA



SSRP1 (10D7): sc-56781. Western blot analysis of SSRP1 expression in non-transfected: sc-117752 (**A**) and human SSRP1 transfected: sc-171570 (**B**) 293T whole cell lysates and K-562 nuclear extract (**C**).



SSRP1 (10D7): sc-56781. Western blot analysis of SSRP1 expression in 293T whole cell lysate.

SELECT PRODUCT CITATIONS

1. Samson, A.L., et al. 2016. Physicochemical properties that control protein aggregation also determine whether a protein is retained or released from necrotic cells. Open Biol. E-published.

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.