

# SSRP1 (D-7): sc-74536

## 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 homologue 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

- Felsenfeld, G. 1992. Chromatin as an essential part of the transcriptional mechanism. *Nature* 355: 219-224.
- Wittmeyer, J. and Formosa, T. 1997. The *Saccharomyces cerevisiae* DNA polymerase  $\alpha$  catalytic subunit interacts with Cdc68/SPT16 and with Pob3, a protein similar to an HMG1-like protein. *Mol. Cell. Biol.* 17: 4178-4190.

## CHROMOSOMAL LOCATION

Genetic locus: SSRP1 (human) mapping to 11q12.1; Ssrp1 (mouse) mapping to 2 D.

## SOURCE

SSRP1 (D-7) is a mouse monoclonal antibody raised against amino acids 1-300 of SSRP1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SSRP1 (D-7) is available conjugated to agarose (sc-74536 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74536 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74536 PE), fluorescein (sc-74536 FITC), Alexa Fluor<sup>®</sup> 488 (sc-74536 AF488), Alexa Fluor<sup>®</sup> 546 (sc-74536 AF546), Alexa Fluor<sup>®</sup> 594 (sc-74536 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-74536 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-74536 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-74536 AF790), 200  $\mu$ g/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

SSRP1 (D-7) is recommended for detection of SSRP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

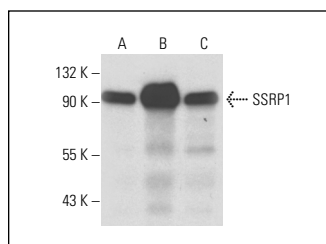
SSRP1 (D-7) is also recommended for detection of SSRP1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for SSRP1 siRNA (h): sc-37877, SSRP1 siRNA (m): sc-37878, SSRP1 shRNA Plasmid (h): sc-37877-SH, SSRP1 shRNA Plasmid (m): sc-37878-SH, SSRP1 shRNA (h) Lentiviral Particles: sc-37877-V and SSRP1 shRNA (m) Lentiviral Particles: sc-37878-V.

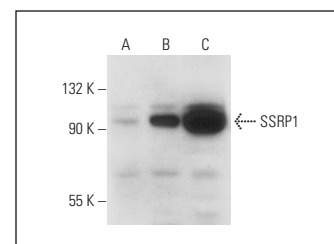
Molecular Weight of SSRP1: 81 kDa.

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

## DATA



SSRP1 (D-7): sc-74536. Western blot analysis of SSRP1 expression in UV-treated HeLa whole cell lysate (A) and K-562 (B) and HEL 92.1.7 (C) nuclear extracts.



SSRP1 (D-7): sc-74536. 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).

## SELECT PRODUCT CITATIONS

- Dinant, C., et al. 2013. Enhanced chromatin dynamics by FACT promotes transcriptional restart after UV-induced DNA damage. *Mol. Cell* 51: 469-479.
- Safina, A., et al. 2017. FACT is a sensor of DNA torsional stress in eukaryotic cells. *Nucleic Acids Res.* 45: 1925-1945.
- Wienholz, F., et al. 2019. FACT subunit Spt16 controls UVSSA recruitment to lesion-stalled RNA Pol II and stimulates TC-NER. *Nucleic Acids Res.* 47: 4011-4025.
- Evangelina Kang, T.Z., et al. 2021. The elevated transcription of ADAM19 by the oncohistone H2BE76K contributes to oncogenic properties in breast cancer. *J. Biol. Chem.* 296: 100374.
- Wu, S., et al. 2022. Pyruvate facilitates FACT-mediated  $\gamma$ H2AX loading to chromatin and promotes the radiation resistance of glioblastoma. *Adv. Sci.* E-published.

## RESEARCH USE

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