

SSBP1 (FL-148): sc-67101

BACKGROUND

The single-stranded-DNA-binding proteins (SSBs) are essential for DNA function in prokaryotic and eukaryotic cells, mitochondria, phages and viruses. Mitochondrial single-stranded DNA-binding protein (mtSSB or SSBP1) is necessary for mtDNA replication. SSBP1 is a homotetramer that binds preferentially and cooperatively to single-stranded DNA. It is localized to the mitochondria in normal and neoplastic human tissue of different origin, function, and differentiation, and is likely involved in mitochondrial DNA replication.

REFERENCES

1. Tiranti, V., et al. 1995. Chromosomal localization of mitochondrial transcription factor A (TCF6), single-stranded DNA-binding protein (SSBP), and endonuclease G (ENDOG). *Genomics* 25: 559-564.
2. Yang, C., et al. 1997. Crystal structure of human mitochondrial single-stranded DNA binding protein at 2.4 Å resolution. *Nat. Struct. Biol.* 4: 153-157.
3. Balducci-Silano, P.L., et al. 1998. Regulation of major histocompatibility (MHC) class II human leukocyte antigen-DR α gene expression in thyrocytes by single strand binding protein-1, a transcription factor that also regulates thyrotropin receptor and MHC class I gene expression. *Endocrinology* 139: 2300-2313.
4. Bayarsaihan, D., et al. 1998. Cloning and characterization of a novel sequence-specific single-stranded-DNA-binding protein. *Biochem. J.* 331: 447-452.
5. Raval-Fernandes, S., et al. 1999. Cloning of a cDNA encoding a sequence-specific single-stranded-DNA-binding protein from *Rattus norvegicus*. *Gene* 237: 201-217.
6. Muller-Hocker, J., et al. 2001. Immunocytochemical localization of mitochondrial single-stranded DNA-binding protein in mitochondria-rich cells of normal and neoplastic human tissue. *Appl. Immunohistochem. Mol. Morphol.* 9: 276-280.

CHROMOSOMAL LOCATION

Genetic locus: SSBP1 (human) mapping to 7q34; Ssbp1 (mouse) mapping to 6 B1.

SOURCE

SSBP1 (FL-148) is a rabbit polyclonal antibody raised against amino acids 1-148 representing full length SSBP1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG 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-67101 X, 200 μ g/0.1 ml.

STORAGE

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

APPLICATIONS

SSBP1 (FL-148) is recommended for detection of SSBP1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

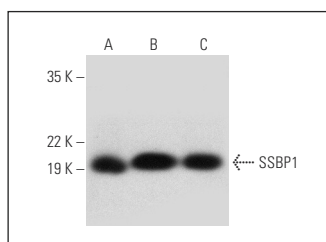
SSBP1 (FL-148) is also recommended for detection of SSBP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SSBP1 siRNA (h): sc-45505, SSBP1 siRNA (m): sc-45506, SSBP1 shRNA Plasmid (h): sc-45505-SH, SSBP1 shRNA Plasmid (m): sc-45506-SH, SSBP1 shRNA (h) Lentiviral Particles: sc-45505-V and SSBP1 shRNA (m) Lentiviral Particles: sc-45506-V.

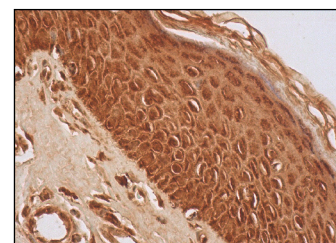
SSBP1 (FL-148) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: HeLa whole cell lysate: sc-2200, MOLT-4 cell lysate: sc-2233 or LNCaP cell lysate: sc-2231.

DATA



SSBP1 (FL-148): sc-67101. Western blot analysis of SSBP1 expression in LNCaP (A), HeLa (B) and MOLT-4 (C) whole cell lysates.



SSBP1 (FL-148): sc-67101. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing cytoplasmic and nuclear staining of epidermal cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **SSBP1 (4C1): sc-293294**, our highly recommended monoclonal alternative to SSBP1 (FL-148).