

# SSBP1 (R-14): sc-34727

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

SSBP1 (R-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SSBP1 of human origin.

## PRODUCT

Each vial contains 200 µg 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-34727 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-34727 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

SSBP1 (R-14) 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), 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).

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.

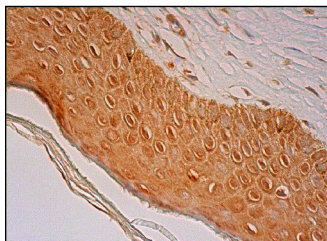
SSBP1 (R-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: MOLT-4 cell lysate: sc-2233 or NIH/3T3 whole cell lysate: sc-2210.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



SSBP1 (R-14): sc-34727. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing cytoplasmic and nuclear staining of epidermal cells.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **SSBP1 (4C1): sc-293294**, our highly recommended monoclonal alternative to SSBP1 (R-14).