

SSBP1 (F-15): sc-34725

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 a 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: 201-207.

CHROMOSOMAL LOCATION

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

SOURCE

SSBP1 (F-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-34725 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-34725 X, 200 µg/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.

RESEARCH USE

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

APPLICATIONS

SSBP1 (F-15) 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).

SSBP1 (F-15) 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.

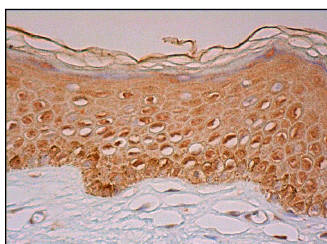
SSBP1 (F-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

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 (F-15): sc-34725. Immunoperoxidase staining of formalin fixed, paraffin-embedded human vulva/anal skin tissue showing cytoplasmic and nuclear staining of epidermal cells.

PROTOCOLS

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