

SSBP1 (4C1): sc-293294

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

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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 thymocytes by single strand binding protein-1, a transcription factor that also regulates thyrotropin receptor and MHC class I gene expression. *Endocrinology* 139: 2300-2313.
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7. Diez-Tascon, C., et al. 2002. Linkage mapping of the ovine single-stranded DNA-binding protein 1 (SSBP1) using microsatellite marker OARCDT7. *Anim. Genet.* 33: 468.
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CHROMOSOMAL LOCATION

Genetic locus: SSBP1 (human) mapping to 7q34.

SOURCE

SSBP1 (4C1) is a mouse monoclonal antibody raised against amino acids 1-148 of SSBP1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

SSBP1 (4C1) is recommended for detection of SSBP1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

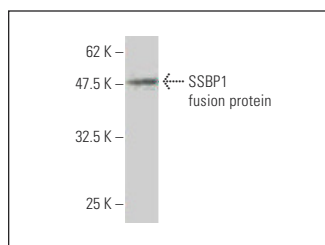
Suitable for use as control antibody for SSBP1 siRNA (h): sc-45505, SSBP1 shRNA Plasmid (h): sc-45505-SH and SSBP1 shRNA (h) Lentiviral Particles: sc-45505-V.

Molecular Weight of SSBP1: 17 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



SSBP1 (4C1): sc-293294. Western blot analysis of human recombinant SSBP1 fusion protein.

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.

PROTOCOLS

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