

SSBP2 (D-3): sc-166687

BACKGROUND

The single-stranded-DNA-binding proteins (SSBs) are essential for DNA function in prokaryotic and eukaryotic cells, as well as in mitochondria, bacteria and viruses. SSBP2 (single-stranded DNA binding protein 2), also known as SSSP2, is a 361 amino acid protein that localizes to the nucleus and contains one LisH domain. Expressed ubiquitously, SSBP2 is thought to induce growth arrest in cancer cells and may, therefore, function as a potent tumor suppressor. The gene encoding SSBP2 maps to human chromosome 5q14.1, which contains 181 million base pairs and comprises nearly 6% of the human genome. Defects in chromosome 5-associated genes are related to the pathogenesis of Cockayne syndrome, familial adenomatous polyposis and Treacher Collins syndrome.

REFERENCES

1. Bayarsaihan, D., et al. 1998. Cloning and characterization of a novel sequence-specific single-stranded-DNA-binding protein. *Biochem. J.* 331: 447-452.
2. Castro, P., et al. 2002. A novel, evolutionarily conserved gene family with putative sequence-specific single-stranded DNA-binding activity. *Genomics* 80: 78-85.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607389. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Liang, H., et al. 2005. SSBP2, a candidate tumor suppressor gene, induces growth arrest and differentiation of myeloid leukemia cells. *Oncogene* 24: 2625-2634.

CHROMOSOMAL LOCATION

Genetic locus: SSBP2 (human) mapping to 5q14.1; Ssbp2 (mouse) mapping to 13 C3.

SOURCE

SSBP2 (D-3) is a mouse monoclonal antibody raised against amino acids 311-355 mapping near the C-terminus of SSBP2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SSBP2 (D-3) is available conjugated to agarose (sc-166687 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166687 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166687 PE), fluorescein (sc-166687 FITC), Alexa Fluor® 488 (sc-166687 AF488), Alexa Fluor® 546 (sc-166687 AF546), Alexa Fluor® 594 (sc-166687 AF594) or Alexa Fluor® 647 (sc-166687 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166687 AF680) or Alexa Fluor® 790 (sc-166687 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

SSBP2 (D-3) is recommended for detection of SSBP2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

SSBP2 (D-3) is also recommended for detection of SSBP2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for SSBP2 siRNA (h): sc-92001, SSBP2 siRNA (m): sc-153840, SSBP2 shRNA Plasmid (h): sc-92001-SH, SSBP2 shRNA Plasmid (m): sc-153840-SH, SSBP2 shRNA (h) Lentiviral Particles: sc-92001-V and SSBP2 shRNA (m) Lentiviral Particles: sc-153840-V.

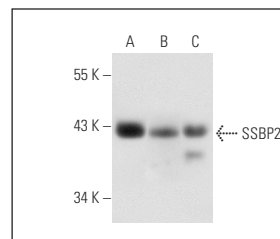
Molecular Weight of SSBP2: 38 kDa.

Positive Controls: H4 whole cell lysate: sc-2408, NIH/3T3 nuclear extract: sc-2138 or Raji whole cell lysate: sc-364236.

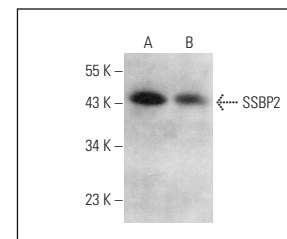
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SSBP2 (H-45): sc-166687. Western blot analysis of SSBP2 expression in Raji (A) and H4 (B) whole cell lysates and NIH/3T3 (C) nuclear extract.



SSBP2 (D-3): sc-166687. Western blot analysis of SSBP2 expression in Jurkat (A) and U-698-M (B) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Layer, J.H., et al. 2020. LDB1 enforces stability on direct and indirect onco-protein partners in leukemia. *Mol. Cell. Biol.* 40: e00652-19.

RESEARCH USE

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

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA