

SSBP2/3/4 (T-15): sc-131793

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), SSBP3 and SSBP4 are related proteins that localize to the nucleus and each contain one LisH domain. Expressed ubiquitously, SSBP2 is thought to induce growth arrest in cancer cells and may, therefore, function as a potent tumor suppressor. Highly expressed in spleen, bone marrow, thymus, lymph node, kidney, brain, heart and skeletal muscle, SSBP3 binds to the single-stranded polypyrimidine sequences in the promoter region of COLA2 genes and is thought to regulate the transcription of COLA2. SSBP4 shares 73% sequence identity with SSBP2 and 72% identity with SSBP3.

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.
5. Xu, Z., et al. 2007. Single-stranded DNA-binding proteins regulate the abundance of LIM domain and LIM domain-binding proteins. *Genes Dev.* 21: 942-955.
6. Liu, J.W., et al. 2008. ssDNA-binding protein 2 is frequently hypermethylated and suppresses cell growth in human prostate cancer. *Clin. Cancer Res.* 14: 3754-3760.
7. Poitras, J.L., et al. 2008. Novel SSBP2-JAK2 fusion gene resulting from a t(5;9)(q14.1;p24.1) in pre-B acute lymphocytic leukemia. *Genes Chromosomes Cancer* 47: 884-889.

SOURCE

SSBP2/3/4 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SSBP2 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-131793 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-131793 X, 200 µg/0.1 ml.

APPLICATIONS

SSBP2/3/4 (T-15) is recommended for detection of SSBP2, SSBP3 and SSBP4 of mouse 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SSBP2/3/4 (T-15) is also recommended for detection of SSBP2, SSBP3 and SSBP4 in additional species, including equine, canine, bovine, porcine and avian.

SSBP2/3/4 (T-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SSBP2/3/4: 38-40 kDa.

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.

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 or our catalog for detailed protocols and support products.