SANTA CRUZ BIOTECHNOLOGY, INC.

SPBP (S-15): sc-86879

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The Power to Question

BACKGROUND

SPBP (SPRE-binding protein), also known as AR1 or TCF20 (transcription factor 20), is a 1,960 amino acid nuclear protein that is expressed in most tissues, with the exception of ovary and prostate. Two isoforms of SPBP exist due to alternative splicing events. While SPBP isoform 1 is predominantly expressed in liver and kidney, with exclusive expression in brain, heart and testis, SPBP isoform 2 is predominantly expressed in lung. Considered a transcriptional activator, SPBP binds to the regulatory region of MMP-3 thereby controlling stromelysin expression. SPBP exists as a homodimer that interacts with RNF4 and c-Jun. SPBP stimulates the activity of several transcriptional activators such as Sp1, Pax-6 and Ets-1, suggesting a function as a co-activator. SPBP contains an A.T. hook DNA-binding domain and a PHD-type zinc finger, and is phosphorylated upon DNA damage by ATM or ATR. It is suggested that SPBP is a phosphoserine-specific repressor of ERα (estrogen receptor α).

REFERENCES

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2. Kirstein, M., et al. 1996. Cross-talk between different enhancer elements during mitogenic induction of the human stromelysin-1 gene. J. Biol. Chem. 271: 18231-18236.
3. Rajadhyaksha, A., et al. 1998. Assignment of AR1, transcription factor 20 (TCF20), to human chromosome 22q13.3 with somatic cell hybrids and *in situ* hybridization. Cytogenet. Cell Genet. 81: 176-177.
4. Lyngso, C., et al. 2000. Interaction between the transcription factor SPBP and the positive cofactor RNF4. An interplay between protein binding zinc fingers. J. Biol. Chem. 275: 26144-26149.
5. Rekdal, C., et al. 2000. The nuclear factor SPBP contains different functional domains and stimulates the activity of various transcriptional activators. J. Biol. Chem. 275: 40288-40300.
6. Gburcik, V., et al. 2005. SPBP is a phosphoserine-specific repressor of estrogen receptor α. Mol. Cell. Biol. 25: 3421-3430.
7. Taniwaki, M., et al. 2006. Gene expression profiles of small-cell lung cancers: molecular signatures of lung cancer. Int. J. Oncol. 29: 567-575.
8. Sjottem, E., et al. 2007. The ePHD protein SPBP interacts with TopBP1 and together they co-operate to stimulate Ets-1-mediated transcription. Nucleic Acids Res. 35: 6648-6662.

CHROMOSOMAL LOCATION

Genetic locus: TCF20 (human) mapping to 22q13.2; Tcf20 (mouse) mapping to 15 E1.

SOURCE

SPBP (S-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of SPBP of human origin.

STORAGE

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86879 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-86879 X, 100 µg/0.1 ml.

APPLICATIONS

SPBP (S-15) is recommended for detection of SPBP 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

SPBP (S-15) is also recommended for detection of SPBP in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SPBP siRNA (h): sc-76551, SPBP siRNA (m): sc-153728, SPBP shRNA Plasmid (h): sc-76551-SH, SPBP shRNA Plasmid (m): sc-153728-SH, SPBP shRNA (h) Lentiviral Particles: sc-76551-V and SPBP shRNA (m) Lentiviral Particles: sc-153728-V.

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

Molecular Weight of SPBP isoform 1: 215 kDa.

Molecular Weight of SPBP isoform 2: 212 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.