

# SPBP siRNA (h): sc-76551

## 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 coactivator. 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 ER $\alpha$  (estrogen receptor  $\alpha$ ).

## REFERENCES

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## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: TCF20 (human) mapping to 22q13.2.

## PRODUCT

SPBP siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SPBP shRNA Plasmid (h): sc-76551-SH and SPBP shRNA (h) Lentiviral Particles: sc-76551-V as alternate gene silencing products.

For independent verification of SPBP (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76551A, sc-76551B and sc-76551C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

SPBP siRNA (h) is recommended for the inhibition of SPBP expression in human cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SPBP gene expression knockdown using RT-PCR Primer: SPBP (h)-PR: sc-76551-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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