

SSB-4 siRNA (h): sc-78045

BACKGROUND

Members of the suppressor of cytokine signaling (SOCS) family of proteins contain C-terminal regions of homology called the SOCS box, which serves to couple SOCS proteins and their binding partners with the Elongin BC complex, thereby mediating protein degradation. Several other families of proteins also contain SOCS boxes, but differ from the SOCS proteins in the type of domain they contain upstream of the SOCS box. SSB-4, also known as SPSB4 (splA/ryanodine receptor domain and SOCS box containing 4), is a 273 amino acid protein that localizes to the cytoplasm and contains one SOCS box domain and one B30.2/SPRY domain. Functioning as a substrate recognition component of the Elongin BC complex, SSB-4 plays a role in the ubiquitination and subsequent proteasomal degradation of target proteins.

REFERENCES

1. Hilton, D.J., et al. 1998. Twenty proteins containing a C-terminal SOCS box form five structural classes. *Proc. Natl. Acad. Sci. USA* 95: 114-119.
2. Kile, B.T., et al. 2002. The SOCS box: a tale of destruction and degradation. *Trends Biochem. Sci.* 27: 235-241.
3. Kamura, T., et al. 2004. VHL-box and SOCS-box domains determine binding specificity for Cul2-Rbx1 and Cul5-Rbx2 modules of ubiquitin ligases. *Genes Dev.* 18: 3055-3065.
4. Wang, D., et al. 2005. The SPRY domain-containing SOCS box protein 1 (SSB-1) interacts with MET and enhances the hepatocyte growth factor-induced Erk-Elk-1-serum response element pathway. *J. Biol. Chem.* 280: 16393-16401.

CHROMOSOMAL LOCATION

Genetic locus: SPSB4 (human) mapping to 3q23.

PRODUCT

SSB-4 siRNA (h) is a pool of 2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SSB-4 shRNA Plasmid (h): sc-78045-SH and SSB-4 shRNA (h) Lentiviral Particles: sc-78045-V as alternate gene silencing products.

For independent verification of SSB-4 (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-78045A and sc-78045B.

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

APPLICATIONS

SSB-4 siRNA (h) is recommended for the inhibition of SSB-4 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

SSB-4 (C-7): sc-514586 is recommended as a control antibody for monitoring of SSB-4 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SSB-4 gene expression knockdown using RT-PCR Primer: SSB-4 (h)-PR: sc-78045-PR (20 μ 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.

PROTOCOLS

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