SANTA CRUZ BIOTECHNOLOGY, INC.

ASB-6 siRNA (m): sc-72559

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 B/C complex. 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. The largest family of SOCS box-containing proteins is the ankyrin repeat and SOCS box-containing (ASB) protein family. ASB-6 (ankyrin repeat and SOCS box-containing 6) is a 421 amino acid member of the ASB family that contains one SOCS box domain and 6 ANK repeats. Localized to the cytoplasm, ASB-6 functions as a substrate-recognition component of an E3 ubiquitin-protein ligase complex and, working in conjunction with other proteins, plays a role in the ubiquitination and subsequent proteasomal degradation of target proteins.

REFERENCES

1. Kile, B.T., et al. 2002. The SOCS box: a tale of destruction and degradation. Trends Biochem. Sci. 27: 235-241.
2. Liu, Y., et al. 2003. Molecular cloning and characterization of the human ASB-8 gene encoding a novel member of ankyrin repeat and SOCS box containing protein family. Biochem. Biophys. Res. Commun. 300: 972-979.
3. Wilcox, A., et al. 2004. Asb6, an adipocyte-specific ankyrin and SOCS box protein, interacts with APS to enable recruitment of elongins B and C to the Insulin receptor signaling complex. J. Biol. Chem. 279: 38881-38888.
4. Kohroki, J., et al. 2005. ASB proteins interact with Cullin5 and Rbx2 to form E3 ubiquitin ligase complexes. FEBS Lett. 579: 6796-6802.
5. Yoshida, K. 2005. Identification and characterization of ankyrin repeat and SOCS box-containing gene ASB15 in silico. Int. J. Mol. Med. 16: 343-347.
6. Debrincat, M.A., et al. 2007. Ankyrin repeat and suppressors of cytokine signaling box protein asb-9 targets creatine kinase B for degradation. J. Biol. Chem. 282: 4728-4737.

CHROMOSOMAL LOCATION

Genetic locus: Asb6 (mouse) mapping to 2 B.

PRODUCT

ASB-6 siRNA (m) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ASB-6 shRNA Plasmid (m): sc-72559-SH and ASB-6 shRNA (m) Lentiviral Particles: sc-72559-V as alternate gene silencing products.

For independent verification of ASB-6 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72559A, sc-72559B and sc-72559C.

PROTOCOLS

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

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ASB-6 siRNA (m) is recommended for the inhibition of ASB-6 expression in mouse 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 µM in 66 µl. 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 ASB-6 gene expression knockdown using RT-PCR Primer: ASB-6 (m)-PR: sc-72559-PR (20 µl). 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.