

# ASB-16 siRNA (m): sc-72553

## 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 and 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. ASB-16 (ankyrin repeat and SOCS box-containing 16) is a 453 amino acid protein belonging to the ankyrin repeat and SOCS box-containing (ASB) protein family. Containing seven ANK repeats and a SOCS domain, ASB-16 may be a substrate-recognition component of a SCF-like ECS (Elongin-Cullin-SOCS-box protein) E3 ubiquitin-protein ligase complex, which mediates the ubiquitination and subsequent proteasomal degradation of target proteins.

## REFERENCES

1. Bork, P. 1993. Hundreds of ankyrin-like repeats in functionally diverse proteins: mobile modules that cross phyla horizontally? *Proteins* 17: 363-374.
2. 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.
3. Kile, B.T., et al. 2000. Cloning and characterization of the genes encoding the ankyrin repeat and SOCS box-containing proteins ASB-1, ASB-2, ASB-3 and ASB-4. *Gene* 258: 331-341.
4. Kile, B.T., et al. 2002. The SOCS box: a tale of destruction and degradation. *Trends Biochem. Sci.* 27: 235-241.
5. 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.
6. Kohroki, J., et al. 2005. ASB proteins interact with Cullin5 and Rbx2 to form E3 ubiquitin ligase complexes. *FEBS Lett.* 579: 6796-6802.
7. Yoshida, K. 2005. Identification and characterization of ankyrin repeat and SOCS box-containing gene ASB15 in silico. *Int. J. Mol. Med.* 16: 343-347.
8. 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.
9. McDanel, T.G. and Spurlock, D.M. 2008. Ankyrin repeat and suppressor of cytokine signaling (SOCS) box-containing protein (ASB) 15 alters differentiation of mouse C2C12 myoblasts and phosphorylation of mitogen-activated protein kinase and Akt. *J. Anim. Sci.* 86: 2897-2902.

## CHROMOSOMAL LOCATION

Genetic locus: Asb16 (mouse) mapping to 11 D.

## RESEARCH USE

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

## PROTOCOLS

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

## PRODUCT

ASB-16 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ASB-16 shRNA Plasmid (m): sc-72553-SH and ASB-16 shRNA (m) Lentiviral Particles: sc-72553-V as alternate gene silencing products.

For independent verification of ASB-16 (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-72553A, sc-72553B and sc-72553C.

## 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

ASB-16 siRNA (m) is recommended for the inhibition of ASB-16 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  $\mu$ 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 ASB-16 gene expression knockdown using RT-PCR Primer: ASB-16 (m)-PR: sc-72553-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.