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# FBXO3 siRNA (m): sc-145116

## BACKGROUND

F-box proteins are critical components of the SCF (Skp1-CUL-1-F-box protein) type E3 ubiquitin ligase complex and are involved in substrate recognition and recruitment for ubiquitination. They are members of a larger family of proteins that are involved in the regulation of a wide variety of cellular processes (including the cell cycle, immune responses, signaling cascades and developmental events) through the targeting of proteins, such as cyclins, cyclin-dependent kinase inhibitors,  $\kappa$ B- $\alpha$  and  $\beta$ -catenin, for proteasomal degradation. FBXO3 (F-box protein 3), also known as FBA or FBX3, is a 471 amino acid member of the F-box protein family. Substrate-recognition component of the SCF (SKP1-CUL1-F-box protein)-type E3 ubiquitin ligase complex, FBXO3 contains an apaG domain and a F-box domain. Existing as two isoforms produced by alternative splicing events, FBXO3 interacts with Skp1 p19 and CUL-1.

## REFERENCES

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- Latres, E., et al. 1999. The human F box protein  $\beta$ -Trcp associates with the Cul1/Skp1 complex and regulates the stability of  $\beta$ -catenin. *Oncogene* 18: 849-854.
- Masuda, K., et al. 2002. Molecular profile of synovial fibroblasts in rheumatoid arthritis depends on the stage of proliferation. *Arthritis Res.* 4: R8.
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- Shima, Y., et al. 2008. PML activates transcription by protecting HIPK2 and p300 from SCFFbx3-mediated degradation. *Mol. Cell. Biol.* 28: 7126-7138.
- Kato, M., et al. 2009. Remodeling of the SCF complex-mediated ubiquitination system by compositional alteration of incorporated F-box proteins. *Proteomics* 10: 115-123.

## CHROMOSOMAL LOCATION

Genetic locus: Fbxo3 (mouse) mapping to 2 E2.

## PRODUCT

FBXO3 siRNA (m) is a target-specific 19-25 nt siRNA 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 FBXO3 shRNA Plasmid (m): sc-145116-SH and FBXO3 shRNA (m) Lentiviral Particles: sc-145116-V as alternate gene silencing 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  $\mu$ 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

FBXO3 siRNA (m) is recommended for the inhibition of FBXO3 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.

## GENE EXPRESSION MONITORING

FBXO3 (C-7): sc-514625 is recommended as a control antibody for monitoring of FBXO3 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 FBXO3 gene expression knockdown using RT-PCR Primer: FBXO3 (m)-PR: sc-145116-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.