

# FBXO17 siRNA (h): sc-97555

## BACKGROUND

F-box (FBX) 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. FBXs 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, I $\kappa$ B- $\alpha$  and  $\beta$ -catenin, for proteasomal degradation. FBXO17 (F-box only protein 17), also known as FBG4, FBX17, FBX26 or FBXO26, is a 278 amino acid protein that contains one F-box domain and one F-box associated domain. Expressed in kidney, heart, liver, skeletal muscle, brain and spleen, FBXO17 functions as a substrate-recognition component of the SCF complex and directly interacts with Skp1 p19 and CUL-1. Multiple isoforms of FBXO17 exist due to alternative splicing events.

## REFERENCES

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2. Skowrya, D., et al. 1997. F-box proteins are receptors that recruit phosphorylated substrates to the SCF ubiquitin-ligase complex. *Cell* 91: 209-219.
3. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. *Curr. Biol.* 9: 1180-1182.
4. Craig, K.L., et al. 1999. The F-box: a new motif for ubiquitin dependent proteolysis in cell cycle regulation and signal transduction. *Prog. Biophys. Mol. Biol.* 72: 299-328.
5. Kipreos, E.T., et al. 2000. The F-box protein family. *Genome Biol.* 1: REVIEWS3002.
6. Ilyin, G.P., et al. 2002. A new subfamily of structurally related human F-box proteins. *Gene* 296: 11-20.
7. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 609094. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: FBXO17 (human) mapping to 19q13.2.

## PRODUCT

FBXO17 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 FBXO17 shRNA Plasmid (h): sc-97555-SH and FBXO17 shRNA (h) Lentiviral Particles: sc-97555-V as alternate gene silencing products.

For independent verification of FBXO17 (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-97555A, sc-97555B and sc-97555C.

## RESEARCH USE

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

## 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

FBXO17 siRNA (h) is recommended for the inhibition of FBXO17 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 FBXO17 gene expression knockdown using RT-PCR Primer: FBXO17 (h)-PR: sc-97555-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

1. Suber, T., et al. 2017. SCFFBXO17 E3 ligase modulates inflammation by regulating proteasomal degradation of glycogen synthase kinase-3 $\beta$  in lung epithelia. *J. Biol. Chem.* 292: 7452-7461.

## PROTOCOLS

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