# FBL17 siRNA (m): sc-145091



The Power to Question

#### **BACKGROUND**

FBL17 (F-box/LRR-repeat protein 17), also designated F-box only protein 13 (FBX013), is a 701 amino acid protein encoded by the human gene FBXL17. FBL17 contains one 40 amino acid F-box region, making it a member of the F-box family. 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. F-box proteins are members of a large family that regulates cell cycle, immune response, signaling cascades and developmental programs by targeting proteins, such as cyclins, cyclin-dependent kinase inhibitors,  $l\kappa$ B- $\alpha$  and  $\beta$ -catenin, for degradation by the proteasome after ubiquitination. FBL17 exists as three isoforms and has been identified as a potential marker and therapeutic target for breast cancer therapy.

## **REFERENCES**

- 1. Winston, J.T., Strack, P., Beer-Romero, P., Chu, C.Y., Elledge, S.J. and Harper, J.W. 1999. The SCF $\beta$ -TRCP-ubiquitin ligase complex associates specifically with phosphorylated destruction motifs in lkB- $\alpha$  and  $\beta$ -catenin and stimulates lkB- $\alpha$  ubiquitination *in vitro*. Genes Dev. 13: 270-283.
- Cenciarelli, C., Chiaur, D.S., Guardavaccaro, D., Parks, W., Vidal, M. and Pagano, M. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.
- 3. Winston, J.T., Koepp, D.M., Zhu, C., Elledge, S.J. and Harper, J.W. 1999. A family of mammalian F-box proteins. Curr. Biol. 9: 1180-1182.
- Craig, K.L. and Tyers, M. 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.
- Ilyin, G.P., Rialland, M., Pigeon, C. and Guguen-Guillouzo, C. 2000. cDNA cloning and expression analysis of new members of the mammalian F-box protein family. Genomics 67: 40-47.
- Schulman, B.A., Carrano, A.C., Jeffrey, P.D., Bowen, Z., Kinnucan, E.R., Finnin, M.S., Elledge, S.J., Harper, J.W., Pagano, M. and Pavletich, N.P. 2000. Insights into SCF ubiquitin ligases from the structure of the Skp1-Skp2 complex. Nature 408: 381-386.
- Ilyin, G.P., Serandour, A.L., Pigeon, C., Rialland, M., Guguen-Guillouzo, C. and Glaise, D. 2002. A new subfamily of structurally related human F-box proteins. Gene 296: 11-20.
- Xiao, G.G., Zhou, B.S., Somlo, G., Portnow, J., Juhasz, A., Un, F., Chew, H., Gandara, D. and Yen, Y. 2008. Identification of F-box/LLR-repeated protein 17 as potential useful biomarker for breast cancer therapy. Cancer Genomics Proteomics 5: 151-160.

## **CHROMOSOMAL LOCATION**

Genetic locus: Fbxl17 (mouse) mapping to 17 E1.1.

### **PROTOCOLS**

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

#### **PRODUCT**

FBL17 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 FBL17 shRNA Plasmid (m): sc-145091-SH and FBL17 shRNA (m) Lentiviral Particles: sc-145091-V as alternate gene silencing products.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20 $^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$  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**

 ${\sf FBL17}$  siRNA (m) is recommended for the inhibition of  ${\sf FBL17}$  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 FBL17 gene expression knockdown using RT-PCR Primer: FBL17 (m)-PR: sc-145091-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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com