

FBL18 siRNA (h): sc-89395

BACKGROUND

FBL18 (F-box and leucine-rich repeat protein 18), also known as FBXL18, is an 805 amino acid protein that contains an F-box near its N-terminus, followed by several leucine-rich repeats and a transmembrane domain at the C-terminus. 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 response, signaling cascades and developmental processes) through the targeting of proteins, such as cyclins and cyclin-dependent kinase inhibitors (CDKs), for degradation by the proteasome after ubiquitination. FBL18 directly interacts with SKP1A p19 and CUL-1, forming a substrate-recognition component of the SCF-type E3 ubiquitin ligase complex. Four isoforms of FBL18 exist due to alternative splicing.

REFERENCES

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2. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. *Curr. Biol.* 9: 1180-1182.
3. Jin, J., et al. 2004. Systematic analysis and nomenclature of mammalian F-box proteins. *Genes Dev.* 18: 2573-2580.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 609084. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Yoshida, Y. 2007. F-box proteins that contain sugar-binding domains. *Biosci. Biotechnol. Biochem.* 71: 2623-2631.
6. Cooke, P.S., et al. 2007. The F-box protein S phase kinase-associated protein 2 regulates adipose mass and adipocyte number *in vivo*. *Obesity* 15: 1400-1408.
7. Bernis, C., et al. 2007. Pin1 stabilizes Emi1 during G₂ phase by preventing its association with SCF (βtrcp). *EMBO Rep.* 8: 91-98.
8. SWISS-PROT/TrEMBL (Q96ME1). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>.

CHROMOSOMAL LOCATION

Genetic locus: FBXL18 (human) mapping to 7p22.1.

PRODUCT

FBL18 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FBL18 shRNA Plasmid (h): sc-89395-SH and FBL18 shRNA (h) Lentiviral Particles: sc-89395-V as alternate gene silencing products.

For independent verification of FBL18 (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-89395A, sc-89395B and sc-89395C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

FBL18 siRNA (h) is recommended for the inhibition of FBL18 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 μ M in 66 μ 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

FBL18 (LL-3): sc-100738 is recommended as a control antibody for monitoring of FBL18 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 κ BP-HRP: sc-516102 or m-IgG κ 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 κ BP-FITC: sc-516140 or m-IgG κ 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 FBL18 gene expression knockdown using RT-PCR Primer: FBL18 (h)-PR: sc-89395-PR (20 μ 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.

PROTOCOLS

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