SANTA CRUZ BIOTECHNOLOGY, INC.

FBL2 siRNA (m): sc-62295

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FBL2 is a 423 amino acid protein encoded by the human gene FBXL2. Similar to Skp2 p45, this protein interacts with Skp1 p19, and deletion of the FBL2 F-box will inhibit this association. However, in contrast to Skp2 p45, FBL2 can be detected in non-proliferating hepatocytes and its expression is increased in growth-arrested liver epithelial cells. In addition, FBL2 is localized primarily in the cytoplasm and is mostly concentrated around the nucleus. Overall, although FBL2 shares strong structural homology with Skp2 p45 as well as having a similar ability to associate with Skp1 p19, these proteins likely play distinct roles and target different substrates to the SCF ubiquitin-protein ligase (Skp1-CUL1-F-box protein) complex. F-box proteins are critical components of the SCF complex and are involved in substrate recognition and recruitment for ubiquitination and consequent degradation by the proteasome. The human FBL2 gene is a highly interrupted gene of at least 126.6 kb located on chromosome 17 in close proximity to the TRAP220 gene in a head-to-tail orientation. The FBL2 protein contains an F-box and six perfect C-terminal leucine-rich repeats.

REFERENCES

1. Ilyin, G.P., et al. 1999. Identification of a novel Skp2-like mammalian protein containing F-box and leucine-rich repeats. FEBS Lett. 459: 75-79.
2. Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.
3. Ilyin, G.P., et al. 2000. cDNA cloning and expression analysis of new members of the mammalian F-box protein family. Genomics 67: 40-47.
4. Wang, C., et al. 2005. Identification of FBL2 as a geranylgeranylated cellular protein required for hepatitis C virus RNA replication. Mol. Cell 18: 425-434.
5. Watashi, K. 2007. Regulation mechanism of hepatitis C virus replication. Tanpakushitsu Kakusan Koso 52: 1139-1143.
6. Malard, V., et al. 2007. Global gene expression profiling in human lung cells exposed to cobalt. BMC Genomics 8: 147-147.

CHROMOSOMAL LOCATION

Genetic locus: Fbxl2 (mouse) mapping to 9 F3.

PRODUCT

FBL2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FBL2 shRNA Plasmid (m): sc-62295-SH and FBL2 shRNA (m) Lentiviral Particles: sc-62295-V as alternate gene silencing products.

For independent verification of FBL2 (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-62295A, sc-62295B and sc-62295C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCL, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

FBL2 siRNA (m) is recommended for the inhibition of FBL2 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 µM in 66 µl. 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 FBL2 gene expression knockdown using RT-PCR Primer: FBL2 (m)-PR: sc-62295-PR (20 µl, 573 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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