SANTA CRUZ BIOTECHNOLOGY, INC.

FBXO22 siRNA (h): sc-90142



BACKGROUND

FBX022 (F-box only protein 22), also known as FBX22 or FBX22p44, is a 403 amino acid protein that is predominately expressed in the liver. 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 (CDKNs), $\mathbf{lkB-\alpha}$ and β -catenin, for degradation by the proteasome after ubiquitination. Three isoforms of FBX022 exist due to alternative splicing.

REFERENCES

- 1. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. Curr. Biol. 9: 1180-1182.
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- 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: 609096. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Yoshida, Y. 2007. F-box proteins that contain sugar-binding domains. Biosci. Biotechnol. Biochem. 71: 2623-2631.
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- Bernis, C., et al. 2007. Pin1 stabilizes Emi1 during G₂ phase by preventing its association with SCF^{βtrcp}. EMBO Rep. 8: 91-98.
- SWISS-PROT/TrEMBL (Q8NEZ5). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: FBX022 (human) mapping to 15q24.2.

PRODUCT

FBX022 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 FBX022 shRNA Plasmid (h): sc-90142-SH and FBX022 shRNA (h) Lentiviral Particles: sc-90142-V as alternate gene silencing products.

For independent verification of FBX022 (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-90142A, sc-90142B and sc-90142C.

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

FBX022 siRNA (h) is recommended for the inhibition of FBX022 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

FBX022 (FF-7): sc-100736 is recommended as a control antibody for monitoring of FBX022 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 MarkerTM 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 FBX022 gene expression knockdown using RT-PCR Primer: FBX022 (h)-PR: sc-90142-PR (20 μ I). 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.