SANTA CRUZ BIOTECHNOLOGY, INC.

FBXO25 siRNA (h): sc-77570

BACKGROUND

FBXO25 (F-box only protein 25), also known as FBX25, is a 367 amino acid protein that contains one C-terminal F-box domain and belongs to the FBX class of the F-box family of proteins. 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, cyclin-dependent kinase inhibitors, IκB-α and β-catenin, for degradation by the proteasome after ubiquitination. Expressed at high levels in brain, FBXO25 localizes predominantly to the nucleus and directly interacts with Skp1 p19 and CUL-1. Disruption of the gene encoding FBXO25 can lead to X-linked mental retardation.

REFERENCES

1. Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.
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: 609098. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Hagens, O., et al. 2006. Characterization of FBX25, encoding a novel brain-expressed F-box protein. Biochim. Biophys. Acta 1760: 110-118.
6. Maragno, A.L., et al. 2006. FBXO25, an F-box protein homologue of atrogin-1, is not induced in atrophying muscle. Biochim. Biophys. Acta 1760: 966-972.

CHROMOSOMAL LOCATION

Genetic locus: FBXO25 (human) mapping to 8p23.3.

PRODUCT

FBXO25 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see FBXO25 shRNA Plasmid (h): sc-77570-SH and FBXO25 shRNA (h) Lentiviral Particles: sc-77570-V as alternate gene silencing products.

For independent verification of FBXO25 (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-77570A, sc-77570B and sc-77570C.

PROTOCOLS

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

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

FBXO25 siRNA (h) is recommended for the inhibition of FBXO25 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 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.

GENE EXPRESSION MONITORING

FBXO25 (G-5): sc-390219 is recommended as a control antibody for monitoring of FBXO25 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 FBXO25 gene expression knockdown using RT-PCR Primer: FBXO25 (h)-PR: sc-77570-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Jiang, G.Y., et al. 2016. FBXO25 promotes cell proliferation, invasion, and migration of NSCLC. Tumour Biol. 37: 14311-14319.

RESEARCH USE

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