SANTA CRUZ BIOTECHNOLOGY, INC.

FBXO9 siRNA (m): sc-145135

BACKGROUND

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 responses, signaling cascades and developmental events) through the targeting of proteins, such as cyclins, cyclin-dependent kinase inhibitors, IκB-α and β-catenin, for proteasomal degradation. FBXO9 (F-box only protein 9), also known as FBX9, VCIA1 or NY-REN-57, is a 447 amino acid protein belonging to the F-box protein family. Containing an F-box domain and a TPR repeat, FBXO9 directly interacts with Skp1 p19 and CUL-1. FBXO9 is a substrate-recognition component of the SCF (SKP1-CUL1-F-box protein)-type E3 ubiquitin ligase complex. As a result of alternative splicing events, three isoforms of FBXO9 are produced.

REFERENCES

1. Erhardt, J.A., et al. 1998. A novel F box protein, NFB42, is highly enriched in neurons and induces growth arrest. J. Biol. Chem. 273: 35222-35227.
2. Cenciarelli, C., et al. 1999. Identification of a family of human F-box proteins. Curr. Biol. 9: 1177-1179.
3. Winston, J.T., et al. 1999. A family of mammalian F-box proteins. Curr. Biol. 9: 1180-1182.
4. Ilyin, G.P., et al. 2002. A new subfamily of structurally related human F-box proteins. Gene 296: 11-20.
5. Yoshida, Y., et al. 2002. E3 ubiquitin ligase that recognizes sugar chains. Nature 418: 438-442.
6. Eom, C.Y. and Lehman, I.R. 2003. Replication-initiator protein (UL9) of the herpes simplex virus 1 binds NFB42 and is degraded via the ubiquitin-proteasome pathway. Proc. Natl. Acad. Sci. USA 100: 9803-9807.
7. Suzuki, T., et al. 2006. Mutation analyses of genes on 6p12-p11 in patients with juvenile myoclonic epilepsy. Neurosci. Lett. 405: 126-131.

CHROMOSOMAL LOCATION

Genetic locus: Fbxo9 (mouse) mapping to 9 E1.

PRODUCT

FBXO9 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 FBXO9 shRNA Plasmid (m): sc-145135-SH and FBXO9 shRNA (m) Lentiviral Particles: sc-145135-V as alternate gene silencing products.

For independent verification of FBXO9 (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-145135A, sc-145135B and sc-145135C.

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

FBXO9 siRNA (m) is recommended for the inhibition of FBXO9 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 FBXO9 gene expression knockdown using RT-PCR Primer: FBXO9 (m)-PR: sc-145135-PR (20 µl). 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.