

HOS siRNA (h): sc-41453

BACKGROUND

β -transducin repeats containing protein (β -TrCP), also designated E3RS^{IkB} or FWD1, and HOS (homologous to Slimb) are F-box proteins that function as substrate recognition subunits of ubiquitin ligases. HOS and β -TrCP differ in their amino-terminal regions, but exhibit high homology within the F-box and WD40 repeat-containing regions. β -TrCP mediates ubiquitin/proteasome-dependent degradation of CD4 and ubiquitination of various proteins including IkB and β -catenin. HOS has also been shown to regulate the degradation of IkB and β -catenin in a similar manner.

REFERENCES

1. Hatakeyama, S., et al. 1990. Ubiquitin-dependent degradation of IkB α is mediated by a ubiquitin ligase Skp1/CUL-1/F-box protein FWD1. *Proc. Natl. Acad. Sci. USA* 96: 3859-3863.
2. Margottin, F., et al. 1998. A novel human WD protein, h- β TrCP, that interacts with HIV-1 Vpu connects CD4 to the ER degradation pathway through an F-box motif. *Mol. Cell* 1: 565-574.
3. Yaron, A., et al. 1998. Identification of the receptor component of the IkB α -ubiquitin ligase. *Nature* 396: 590-594.
4. Zhou, P. and Howley, P.M. 1998. Ubiquitination and degradation of the substrate recognition subunits of SCF ubiquitin-protein ligases. *Mol. Cell* 2: 571-580.
5. Fuchs, S.Y., et al. 1999. HOS, a human homolog of Slimb, forms an SCF complex with Skp1 and Cullin1 and targets the phosphorylation-dependent degradation of IkB and β -catenin. *Oncogene* 18: 2039-2046.

CHROMOSOMAL LOCATION

Genetic locus: FBXW11 (human) mapping to 5q35.1.

PRODUCT

HOS 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 HOS shRNA Plasmid (h): sc-41453-SH and HOS shRNA (h) Lentiviral Particles: sc-41453-V as alternate gene silencing products.

For independent verification of HOS (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-41453A, sc-41453B and sc-41453C.

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

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

β -TrCP/HOS (F-10): sc-166492 is recommended as a control antibody for monitoring of HOS 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 HOS gene expression knockdown using RT-PCR Primer: HOS (h)-PR: sc-41453-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Yoo, J.O., et al. 2016. miR-181b-3p promotes epithelial-mesenchymal transition in breast cancer cells through Snail stabilization by directly targeting YWHAG. *Biochim. Biophys. Acta* 1863: 1601-1611.

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.