

TRIP15 siRNA (h): sc-43546

BACKGROUND

TRIP1-TRIP15 genes encode thyroid hormone receptor β (TR β)-binding proteins. TRIP15, along with Cops2 and Alien comprise the second subunit (CSN2) of the COP9 signalosome (CSN), an eight-subunit complex with a variety of functions. CSN regulates Skp1-cullin-F-box protein (SCF) ubiquitinating ligases by deconjugating Nedd-8 from the Cul1 component of the SCF, and also associates with protein kinase activities targeting p53, c-Jun, and I κ B. Consequently, inhibition of SCF ubiquitin ligase activity occurs, and cell cycle progression halts at the transition from G₁ to S phase. TRIP15 contains an acidic region in the N-terminus, a putative zinc finger in the C-terminus, and a central hydrophobic core region flanked by two putative α -helical structures and a nuclear localization signal.

REFERENCES

1. Cohen, H., et al. 2000. Interaction between interferon consensus sequence-binding protein and COP9/signalosome subunit CSN2 (TRIP15). A possible link between interferon regulatory factor signaling and the COP9/signalosome. *J. Biol. Chem.* 275: 39081-39089.
2. Yang, X., et al. 2002. The COP9 signalosome inhibits p27^{Kip1} degradation and impedes G₁ to S phase progression via deneddylation of SCF Cul1. *Curr. Biol.* 12: 667-672.
3. Katoh, M., et al. 2003. Identification and characterization of TRIP8 gene in silico. *Int. J. Mol. Med.* 12: 817-821.
4. Lykke-Andersen, K., et al. 2003. Disruption of the COP9 signalosome CSN2 subunit in mice causes deficient cell proliferation, accumulation of p53 and cyclin E, and early embryonic death. *Mol. Cell. Biol.* 23: 6790-6797.
5. Akiyama, H., et al. 2003. Implication of TRIP15/CSN2 in early stage of neuronal differentiation of P19 embryonal carcinoma cells. *Brain Res. Dev. Brain Res.* 140: 45-56.
6. Akiyama, H., et al. 2003. The role of transcriptional corepressor Nif31 in early stage of neural differentiation via cooperation with TRIP15/CSN2. *J. Biol. Chem.* 278: 10752-10762.

CHROMOSOMAL LOCATION

Genetic locus: COPS2 (human) mapping to 15q21.1.

PRODUCT

TRIP15 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 TRIP15 shRNA Plasmid (h): sc-43546-SH and TRIP15 shRNA (h) Lentiviral Particles: sc-43546-V as alternate gene silencing products.

For independent verification of TRIP15 (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-43546A, sc-43546B and sc-43546C.

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 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

TRIP15 siRNA (h) is recommended for the inhibition of TRIP15 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

TRIP15 (42): sc-136511 is recommended as a control antibody for monitoring of TRIP15 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 TRIP15 gene expression knockdown using RT-PCR Primer: TRIP15 (h)-PR: sc-43546-PR (20 μ l). 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.