

TRIP13 siRNA (h): sc-91672

BACKGROUND

Thyroid hormone receptors (TRs) are transcription factors that regulate the expression of specific genes in a hormone-dependent manner. TRIP13 (thyroid hormone receptor interactor 13), also called 16E1BP, is a transcription factor that interacts with the ligand binding domain of the thyroid receptor (TR) as well as a variety of target genes including human papilloma virus type 16 (HPV16) E1. Unlike most TRIP proteins which function only in the presence of hormones, TRIP13 does not require the presence of thyroid hormone to interact with TR. The association of TRIP13 with (HPV16) E1 suggests that TRIP13 may have tumor suppressor gene function. TRIP13 is a 432 amino acid protein with two different isoforms produced by alternative splicing.

REFERENCES

1. Lee, J.W., Choi, H.S., Gyuris, J., Brent, R. and Moore, D.D. 1995. Two classes of proteins dependent on either the presence or absence of thyroid hormone for interaction with the thyroid hormone receptor. *Mol. Endocrinol.* 9: 243-254.
2. Yasugi, T., Vidal, M., Sakai, H., Howley, P.M. and Benson, J.D. 1997. Two classes of human papillomavirus type 16 E1 mutants suggest pleiotropic conformational constraints affecting E1 multimerization, E2 interaction, and interaction with cellular proteins. *J. Virol.* 71: 5942-5951.
3. Arias-Pulido, H., Narayan, G., Vargas, H., Mansukhani, M. and Murty, V.V. 2002. Mapping common deleted regions on 5p15 in cervical carcinoma and their occurrence in precancerous lesions. *Mol. Cancer* 1: 3.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604507. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Li, X.C. and Schimenti, J.C. 2007. Mouse pachytene checkpoint 2 (TRIP13) is required for completing meiotic recombination but not synapsis. *PLoS Genet.* 3: e130.

CHROMOSOMAL LOCATION

Genetic locus: TRIP13 (human) mapping to 5p15.33.

PRODUCT

TRIP13 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 TRIP13 shRNA Plasmid (h): sc-91672-SH and TRIP13 shRNA (h) Lentiviral Particles: sc-91672-V as alternate gene silencing products.

For independent verification of TRIP13 (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-91672A, sc-91672B and sc-91672C.

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 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

TRIP13 siRNA (h) is recommended for the inhibition of TRIP13 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

TRIP13 (A-7): sc-514285 is recommended as a control antibody for monitoring of TRIP13 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 TRIP13 gene expression knockdown using RT-PCR Primer: TRIP13 (h)-PR: sc-91672-PR (20 μ l). 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.