

TCF-19 siRNA (h): sc-63113

BACKGROUND

TCF-19 (transcription factor 19), also known as SC1 or SC1-1, is a 345 amino acid protein that contains one FHA domain, a proline-rich domain and one PHD-type zinc finger. Localizing to the nucleus, TCF-19 is a growth regulated protein that is believed to function as a *trans*-activating factor with a role in the transcription of genes involved in the late stages of cell cycle progression (G₁ to S transition or entry of cells into G₂ and mitosis). TCF-19 is expressed preferentially in the G₁-S phase of the cell cycle. The gene encoding TCF-19 localizes to a critical region on chromosome 6 that has been associated with psoriasis vulgaris, a disorder of the skin that is characterized by hyperproliferation of epidermal cells. This suggests that TCF-19, via its regulation of late cell cycle-specific genes, may play a role in the development of this disorder.

REFERENCES

1. Ku, D.H., et al. 1991. A new growth-regulated complementary DNA with the sequence of a putative *trans*-activating factor. *Cell Growth Differ.* 2: 179-186.
2. Krishnan, B.R., et al. 1995. Feature mapping of the HLA class I region: localization of the POU5F1 and TCF19 genes. *Genomics* 30: 53-58.
3. Goldsworthy, M., et al. 1997. Identification of new HLA class I region genes by sample sequencing. *Immunogenetics* 46: 206-212.
4. Oka, A., et al. 1999. Association analysis using refined microsatellite markers localizes a susceptibility locus for psoriasis vulgaris within a 111 kb segment telomeric to the HLA-C gene. *Hum. Mol. Genet.* 8: 2165-2170.
5. Shiina, T., et al. 1999. Genome sequencing analysis of the 1.8 Mb entire human MHC class I region. *Immunol. Rev.* 167: 193-199.

CHROMOSOMAL LOCATION

Genetic locus: TCF19 (human) mapping to 6p21.33.

PRODUCT

TCF-19 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 TCF-19 shRNA Plasmid (h): sc-63113-SH and TCF-19 shRNA (h) Lentiviral Particles: sc-63113-V as alternate gene silencing products.

For independent verification of TCF-19 (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-63113A, sc-63113B and sc-63113C.

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

TCF-19 siRNA (h) is recommended for the inhibition of TCF-19 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

TCF-19 (H-2): sc-390923 is recommended as a control antibody for monitoring of TCF-19 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 TCF-19 gene expression knockdown using RT-PCR Primer: TCF-19 (h)-PR: sc-63113-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. Sen, S., et al. 2017. Transcription factor 19 interacts with histone 3 lysine 4 trimethylation and controls gluconeogenesis via the nucleosome-remodeling-deacetylase complex. *J. Biol. Chem.* 292: 20362-20378.
2. Mondal, P., et al. 2019. TCF19 promotes cell proliferation through binding to the Histone H3K4me3 mark. *Biochemistry*. E-published.

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.