SANTA CRUZ BIOTECHNOLOGY, INC.

TIS11D siRNA (m): sc-76675

BACKGROUND

TIS11D, also known as ZFP36LA (zinc finger protein 36, C3H type-like 2), BRF2 (butyrate response factor 2), ERF2 or RNF162C, is a 494 amino acid protein that localizes to the nucleus and contains two CSH1-type zinc fingers. Belonging to the TIS11 family of early response proteins, TIS11D is thought to function as a nuclear transcription factor that binds to 5'UUAUUUAUUU-3' core RNA sequences and may regulate growth factor-induced cellular responses. The gene encoding TIS11D maps to human chromosome 2, which houses over 1,400 genes and comprises nearly 8% of the human genome. Harlequin icthyosis, a rare and morbid skin deformity, is associated with mutations in the ABCA12 gene, while the lipid metabolic disorder sitosterolemia is associated with defects in the ABCG5 and ABCG8 genes. Additionally, an extremely rare recessive genetic disorder, Alström syndrome, is caused by mutations in the ALMS1 gene, which maps to chromosome 2.

REFERENCES

1. Nie, X.F., et al. 1995. ERF-2, the human homologue of the murine Tis11d early response gene. Gene 152: 285-286.
2. Ino, T., et al. 1995. Identification of a member of the TIS11 early response gene family at the insertion point of a DNA fragment containing a gene for the T-cell receptor beta chain in an acute T-cell leukemia. Oncogene 11: 2705-2710.
3. Blackshear, P.J., et al. 2003. Polymorphisms in the genes encoding members of the tristetraprolin family of human tandem CCCH zinc finger proteins. Prog. Nucleic Acid Res. Mol. Biol. 75: 43-68.
4. Hudson, B.P., et al. 2004. Recognition of the mRNA AU-rich element by the zinc finger domain of TIS11D. Nat. Struct. Mol. Biol. 11: 257-264.
5. Jackson, R.S., et al. 2006. TIS11D is a candidate pro-apoptotic p53 target gene. Cell Cycle 5: 2889-2893.
6. Liang, J., et al. 2008. Genome-wide survey and expression profiling of CCCH-zinc finger family reveals a functional module in macrophage activation. PLoS ONE 3: e2880.
7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612053. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Zfp36l2 (mouse) mapping to 17 E4.

PRODUCT

TIS11D 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 TIS11D shRNA Plasmid (m): sc-76675-SH and TIS11D shRNA (m) Lentiviral Particles: sc-76675-V as alternate gene silencing products.

For independent verification of TIS11D (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-76675A, sc-76675B and sc-76675C.

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

TIS11D siRNA (m) is recommended for the inhibition of TIS11D 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.

GENE EXPRESSION MONITORING

TIS11D (A-3): sc-365908 is recommended as a control antibody for monitoring of TIS11D 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 TIS11D gene expression knockdown using RT-PCR Primer: TIS11D (m)-PR: sc-76675-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.