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YTHDF3 siRNA (m): sc-155425

BACKGROUND

The YTH domain family protein family (YTHDF) includes YTHDF1, YTHDF2 and YTHDF3. YTHDF1, also designated Dermatomyositis associated with cancer putative autoantigen 1 (DACA-1), is a 559 amino acid protein that contains one YTH domain, a potential RNA binding domain. YTHDF2, also designated High-glucose-regulated protein 8, CLL-associated antigen KW-14 or Renal carcinoma antigen NY-REN-2, is a 579 amino acid protein that also contains one YTH domain. YTHDF3 is a 585 amino acid protein that also contains one YTH domain. The gene encoding YTHDF3 maps to chromosome 8q12.3 which encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Ythdf3 (mouse) mapping to 3 A1.

PRODUCT

YTHDF3 siRNA (m) is a target-specific 19-25 nt siRNA 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 YTHDF3 shRNA Plasmid (m): sc-155425-SH and YTHDF3 shRNA (m) Lentiviral Particles: sc-155425-V as alternate gene silencing 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

YTHDF3 siRNA (m) is recommended for the inhibition of YTHDF3 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 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

YTHDF3 (F-2): sc-377119 is recommended as a control antibody for monitoring of YTHDF3 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 YTHDF3 gene expression knockdown using RT-PCR Primer: YTHDF3 (m)-PR: sc-155425-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.

PROTOCOLS

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