SANTA CRUZ BIOTECHNOLOGY, INC.

DUS2L siRNA (m): sc-143192

BACKGROUND

DUS2L (tRNA-dihydrouridine synthase 2-like), also known as URLC8 (up-regulated in lung cancer protein 8) or SMM1, is a 493 amino acid member of the DUS protein family. Localized to cytoplasm and endoplasmic reticulum, DUS2L uses FAD as a cofactor to catalyze the synthesis of dihydrouridine, a modified base found in the D-loop of most tRNAs. DUS2L contains one DRBM (double-stranded RNA-binding) domain and has been found to interact with ProRS. DUS2L is upregulated in most lung cancer cells and has weak expression in normal heart, skeletal muscle and placenta. The gene that encodes DUS2L maps to human chromosome 16q22.1 and murine chromosome 8 D3.

REFERENCES

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4. Mittelstadt, M., Frump, A., Khuu, T., Fowlkes, V., Handy, I., Patel, C.V. and Patel, R.C. 2008. Interaction of human tRNA-dihydrouridine synthase-2 with interferon-induced protein kinase PKR. Nucleic Acids Res. 36: 998-1008.
5. Hendrickson, S.L., Lautenberger, J.A., Chinn, L.W., Malasky, M., Sezgin, E., Kingsley, L.A., Goedert, J.J., Kirk, G.D., Gomperts, E.D., Buchbinder, S.P., Troyer, J.L. and O'Brien, S.J. 2010. Genetic variants in nuclear-encoded mitochondrial genes influence AIDS progression. PLoS ONE 5: e12862.

CHROMOSOMAL LOCATION

Genetic locus: Dus2 (mouse) mapping to 8 D3.

PRODUCT

DUS2L 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DUS2L shRNA Plasmid (m): sc-143192-SH and DUS2L shRNA (m) Lentiviral Particles: sc-143192-V as alternate gene silencing products.

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.

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

DUS2L siRNA (m) is recommended for the inhibition of DUS2L 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DUS2L gene expression knockdown using RT-PCR Primer: DUS2L (m)-PR: sc-143192-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.