

NOC3L siRNA (m): sc-150016

BACKGROUND

GADD 153, a growth arrest and DNA damage-inducible gene, encodes a C/EBP-related nuclear protein. This protein has also been designated C/EBP-homologous protein (CHOP-10 or C/EBP ζ). GADD 153 expression is induced by a variety of cellular stresses, inducing nutrient deprivation and metabolic perturbations. GADD 153 functions to block cells in G₁ to S phase during cell cycle progression and acts by dimerizing with other C/EBP proteins to direct GADD 153 dimers away from "classical" C/EBP binding sites, recognizing instead unique "nonclassical" sites. Thus, GADD 153 acts as a negative modulator of C/EBP-like proteins in certain terminally differentiated cells. GADD 153 belongs to the CBF/MAK21 family, which also includes NOC2L, NOC3L and NOC4L. NOC3L, also designated factor for adipocyte differentiation 24 or Fad24, promotes adipogenesis by controlling DNA replication during the early stages of mitotic clonal expansion (MCE).

REFERENCES

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4. Gujuluva, C.N., et al. 1994. Effect of UV-irradiation on cell cycle, viability and the expression of p53, GADD 153 and GADD 45 genes in normal and HPV-immortalized human oral keratinocytes. *Oncogene* 9: 1819-1827.
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8. Johmura, Y., et al. 2008. FAD24, a regulator of adipogenesis and DNA replication, inhibits H-RAS-mediated transformation by repressing NF κ B activity. *Biochem. Biophys. Res. Commun.* 369: 464-470.
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CHROMOSOMAL LOCATION

Genetic locus: Noc3l (mouse) mapping to 19 C3.

PROTOCOLS

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

PRODUCT

NOC3L 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 NOC3L shRNA Plasmid (m): sc-150016-SH and NOC3L shRNA (m) Lentiviral Particles: sc-150016-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

NOC3L siRNA (m) is recommended for the inhibition of NOC3L 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor NOC3L gene expression knockdown using RT-PCR Primer: NOC3L (m)-PR: sc-150016-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.