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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic)



NUDT12 siRNA (m): sc-150102

BACKGROUND

NUDT12 (nucleoside diphosphate linked moiety X)-type motif 12) is a 462 amino acid peroxisomal protein belonging to the nudix hydrolase family and the NudC subfamily. Nudix hydrolases contain a characteristic nudix domain and are responsible for catalyzing the hydrolysis of nucleoside diphosphate derivatives. NUDT12 functions as a manganese-dependent polyphosphate phosphohydrolase at an optimum pH of 8-9. Containing three ANK repeats and a nudix hydrolase domain, NUDT12 may act to regulate the concentration of peroxisomal nicotinamide nucleotide cofactors, which are required for oxidative metabolism in peroxisomes. The gene encoding NUDT12 maps to human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Nudt12 (mouse) mapping to 17 D.

PRODUCT

NUDT12 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see NUDT12 shRNA Plasmid (m): sc-150102-SH and NUDT12 shRNA (m) Lentiviral Particles: sc-150102-V as alternate gene silencing products.

For independent verification of NUDT12 (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-150102A, sc-150102B and sc-150102C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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

NUDT12 siRNA (m) is recommended for the inhibition of NUDT12 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 NUDT12 gene expression knockdown using RT-PCR Primer: NUDT12 (m)-PR: sc-150102-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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