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ICT1 siRNA (m): sc-146138

BACKGROUND

Stem cell differentiation in the adult colon leads to three distinct cell types that make up the tissue of the lower intestine. Neoplastic transformation can deviate a stem cell, or its early descendants, along the maturation pathway that leads to these three cell types. This neoplastic-induced deviation is marked by a change in expression of several mRNAs. ICT1, also known as DS-1, is a member of the prokaryotic/mitochondrial release factor family whose expression is downregulated over four fold upon colon stem cell differentiation. This downregulation of ICT1 could lead to its use as a marker for detection of colon carcinomas.

REFERENCES

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6. Ghosh, A.K., Ramakrishnan, G. and Rajasekharan, R. 2008. YLR099C (ICT1) encodes for a soluble acyl-CoA dependent lysophosphatidic acid acyltransferase responsible for enhanced phospholipid synthesis on organic solvent stress in *Saccharomyces cerevisiae*. *J. Biol. Chem.* 283: 9768-9775.

CHROMOSOMAL LOCATION

Genetic locus: Ict1 (mouse) mapping to 11 E2.

PRODUCT

ICT1 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 ICT1 shRNA Plasmid (m): sc-146138-SH and ICT1 shRNA (m) Lentiviral Particles: sc-146138-V as alternate gene silencing products.

For independent verification of ICT1 (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-146138A, sc-146138B and sc-146138C.

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

ICT1 siRNA (m) is recommended for the inhibition of ICT1 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 ICT1 gene expression knockdown using RT-PCR Primer: ICT1 (m)-PR: sc-146138-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.