SANTA CRUZ BIOTECHNOLOGY, INC.

ESCO2 siRNA (m): sc-144942

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The Power to Question

BACKGROUND

EFO2 (establishment of cohesion 1 homolog 2 *(Saccharomyces cerevisiae))* is also known as N-acetyltransferase ESCO2 and is a 601 amino acid protein. EFO2 can be detected throughout fetal tissue and is expressed in adult thymus, placenta and small intestine. EFO2 is thought to cause cohesion of sister cromatids during the S phase of the cell cycle. The C-terminal end of EFO2 may possess acetyltransferase activity, suggesting that EFO2 may also be involved in regulating chromatin structure and, ultimately, gene expression. Defects in the gene encoding EFO2 cause two cohesinopathies, referred to as Roberts syndrome (RBS) and SC phocomelia syndrome, also called SC pseudothalidomide syndrome. RBS is rare, and can have strongly expressed phenotypes, including growth retardation, both prenatal and postnatal, as well as symmetric mesomelia, microcephaly and stillbirth or death soon after birth. SC phocomelia syndrome has a higher rate of adulthood survival than RBS. While both SC phocomelia and RBS are characterized by limb reduction, SC phocomelia is also associated with underdeveloped facial features and contractures of flexion in joints.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Esco2 (mouse) mapping to 14 D1.

PRODUCT

ESCO2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ESCO2 shRNA Plasmid (m): sc-144942-SH and ESCO2 shRNA (m) Lentiviral Particles: sc-144942-V as alternate gene silencing products.

For independent verification of ESCO2 (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-144942A, sc-144942B and sc-144942C.

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

ESCO2 siRNA (m) is recommended for the inhibition of ESCO2 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 ESCO2 gene expression knockdown using RT-PCR Primer: ESCO2 (m)-PR: sc-144942-PR (20 µl). 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.