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Elastase-3 siRNA (m): sc-144629

BACKGROUND

Elastases belong to a subfamily of serine proteases that function to catalytically hydrolyze a wide variety of proteins. Elastase-3, also known as Ela3, Ela3b or Cela3b (chymotrypsin-like elastase family, member 3B), is a 255 amino acid murine protein that belongs to the peptidase S1 family and is the homolog of human Elastase-3B. There are six human Elastase genes that encode structurally similar proteins, Elastase-1, 2, 2A, 2B, 3A, and 3B. Unlike the other Elastase proteins, Elastase-3B has little elastolytic activity. Secreted as a zymogen from the pancreas, Elastase-3B possesses similar functions as Elastase-3A, in which it acts as a digestive enzyme in the intestine and participates in metabolic degradation pathways by preferentially cleaving proteins that have alanine residues. In addition, Elastase-3B is thought to play a role in the metabolism and transport of cholesterol molecules in the intestine.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Cela3b (mouse) mapping to 4 D3.

PROTOCOLS

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

PRODUCT

Elastase-3 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 Elastase-3 shRNA Plasmid (m): sc-144629-SH and Elastase-3 shRNA (m) Lentiviral Particles: sc-144629-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

Elastase-3 siRNA (m) is recommended for the inhibition of Elastase-3 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 Elastase-3 gene expression knockdown using RT-PCR Primer: Elastase-3 (m)-PR: sc-144629-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.