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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

SANTA CRUZ BIOTECHNOLOGY, INC.

Trypsin X3 siRNA (m): sc-154702

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The human pancreas secretes three different isoforms of the inactive trypsinogen into the small intestine, namely cationic trypsinogen, anionic trypsinogen (the two major isoforms) and mesotrypsinogen (a minor isoform). In the small intestine, each isoform is cleaved by Enterokinase into its active form: Trypsin-1, Trypsin-2 and Trypsin-3, respectively. All Trypsins are members of the serine protease Trypsin family. The activated Trypsins go on to activate other protease zymogens and play a role in the autoactivation of trypsinogens, suggesting an important role for Trypsins in digestion. Trypsin X3, also known as TRYX3 or TRY1, is a 241 amino acid secreted protein that contains one peptidase S1 domain and functions to catalyze the cleavage of specific amino acid bonds.

REFERENCES

1. Scheele, G., Bartelt, D. and Bieger, W. 1981. Characterization of human exocrine pancreatic proteins by two-dimensional isoelectric focusing/sodium dodecyl sulfate gel electrophoresis. Gastroenterology 80: 461-473.
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4. Kleeff, J., Friess, H., Korc, M. and Büchler, M.W. 2000. Chronic pancreatitis: pathogenesis and molecular aspects. Ann. Ital. Chir. 71: 3-10.
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7. Teich, N. and Mössner, J. 2008. Hereditary chronic pancreatitis. Best Pract. Res. Clin. Gastroenterol. 22: 115-130.

CHROMOSOMAL LOCATION

Genetic locus: Prss58 (mouse) mapping to 6 B1.

PRODUCT

Trypsin X3 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 Trypsin X3 shRNA Plasmid (m): sc-154702-SH and Trypsin X3 shRNA (m) Lentiviral Particles: sc-154702-V as alternate gene silencing products.

For independent verification of Trypsin X3 (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-154702A, sc-154702B and sc-154702C.

PROTOCOLS

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

Trypsin X3 siRNA (m) is recommended for the inhibition of Trypsin X3 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 Trypsin X3 gene expression knockdown using RT-PCR Primer: Trypsin X3 (m)-PR: sc-154702-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.