SANTA CRUZ BIOTECHNOLOGY, INC.

IST1 siRNA (m): sc-108728

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The Power to Question

BACKGROUND

IST1 (increased sodium tolerance 1 homolog), also known as KIAA0174, is a 364 amino acid protein that belongs to the IST1 family and interacts with CHMP1A, CHMP1B, Vta1 and VPS4A. IST1 also interacts with Spastin, STAMBP, UBPY and MITD1. IST1 may be involved in ESCRT machinery functions and is required for the final step in cytokinesis (abscission). IST1 is found in the cytoplasmic vesicle that localizes to the midbody of dividing cells. IST1 undergoes alternative splicing events, resulting in four isoforms and is post-translationally phosphorylated at amino acid residue 43 (Tyr). The gene encoding IST1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

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CHROMOSOMAL LOCATION

Genetic locus: Ist1 (mouse) mapping to 8 D3.

PRODUCT

IST1 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 IST1 shRNA Plasmid (m): sc-108728-SH and IST1 shRNA (m) Lentiviral Particles: sc-108728-V as alternate gene silencing products.

For independent verification of IST1 (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-108728A, sc-108728B and sc-108728C.

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

IST1 siRNA (m) is recommended for the inhibition of IST1 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 IST1 gene expression knockdown using RT-PCR Primer: IST1 (m)-PR: sc-108728-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.

PROTOCOLS

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