SANTA CRUZ BIOTECHNOLOGY, INC.

GZF1 siRNA (h): sc-76979

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The Power to Question

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. As a member of the Krüppel C_2H_2-type zinc-finger protein family, GZF1 (GDNF-inducible zinc finger protein 1), also known as NF336 (zinc finger protein 336) or ZBTB23 (zinc finger and BTB domain-containing protein 23), is a 711 amino acid nuclear protein that contains one BTB (POZ) domain and ten C_2H_2-type zinc fingers. GZF1 functions as a transcription repressor and binds the GZF1 responsive element (GRE). Expressed highly in liver, kidney, brain and muscle, GZF1 is upregulated in response to glial cell line-derived neurotrophic factor (GDNF) stimulation. Knockdown of GZF1 mRNA impairs ureteric bud branching in mouse, suggesting that GZF1 may be necessary for renal branching morphogenesis. GZF1 exists as two alternatively spliced isoforms.

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CHROMOSOMAL LOCATION

Genetic locus: GZF1 (human) mapping to 20p11.21.

PRODUCT

GZF1 siRNA (h) 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 GZF1 shRNA Plasmid (h): sc-76979-SH and GZF1 shRNA (h) Lentiviral Particles: sc-76979-V as alternate gene silencing products.

For independent verification of GZF1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-76979A, sc-76979B and sc-76979C.

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

GZF1 siRNA (h) is recommended for the inhibition of GZF1 expression in human 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 GZF1 gene expression knockdown using RT-PCR Primer: GZF1 (h)-PR: sc-76979-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.