SANTA CRUZ BIOTECHNOLOGY, INC.

# ICA69 siRNA (h): sc-72102

## BACKGROUND

Pancreatic islet cells are clusters of endocrine cells that are scattered throughout the tissue of the pancreas and secrete Insulin and glucagon, which help the body store and use sugars. Each islet contains approximately 1,000 cells and is 50-500 µm in diameter. Islet cell autoantigen 1, also designated ICA69 or p69 protein, is an environmental trigger molecule that induces diabetic autoimmunity to Insulin producing islet cells. The human ICA1 gene maps to chromosome 7p21.3 and generates three transcript variants that encode the T cell epitope (in exon 2) that is detectable by autoreactive T cells in diabetic children. Human ICA69 transcript is abundant in pancreas, brain and heart, with lower levels of expression found in lung, liver, thyroid and kidney.

## REFERENCES


1. Ching, C.K., et al. 1988. Identification and partial characterization of a new pancreatic cancer-related serum glycoprotein by sodium dodecyl sulfate-polyacrylamide gel electrophoresis and lectin blotting. Gastroenterology 95: 137-142.
2. Skinner, J.R., et al. 1992. Central venous pressure in the ventilated neonate. Arch. Dis. Child. 67: 374-377.
3. Pietropaolo, M., et al. 1993. Islet cell autoantigen 69 kD (ICA69). Molecular cloning and characterization of a novel diabetes-associated autoantigen. J. Clin. Invest. 92: 359-371.
4. Hirano, K., et al. 1999. A case of non-functioning malignant islet cell tumor with egg-shaped calcification. Nihon Shokakibyo Gakkai Zasshi 96: 189-193.
5. Hochwald, S.N., et al. 2001. Laparoscopy predicts metastatic disease and spares laparotomy in selected patients with pancreatic nonfunctioning islet cell tumors. Ann. Surg. Oncol. 8: 249-253.
6. Kumagai, N., et al. 2002. Vascularized islet-cell transplantation in miniature swine. I. Preparation of vascularized islet kidneys. Transplantation 74: 1223-1230.


## CHROMOSOMAL LOCATION

Genetic locus: ICA1 (human) mapping to 7p21.3.

## PRODUCT

ICA69 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 ICA69 shRNA Plasmid (h): sc-72102-SH and ICA69 shRNA (h) Lentiviral Particles: sc-72102-V as alternate gene silencing products.

For independent verification of ICA69 (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-72102A, sc-72102B and sc-72102C.

## 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

ICA69 siRNA (h) is recommended for the inhibition of ICA69 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.

## GENE EXPRESSION MONITORING

ICA69 (A-1): sc-271489 is recommended as a control antibody for monitoring of ICA69 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ICA69 gene expression knockdown using RT-PCR Primer: ICA69 (h)-PR: sc-72102-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.