ICA69 (A-1): sc-271489

SANTA CRUZ®
BIOTECHNOLOGY

The Power to Question

BACKGROUND

Pancreatic islet cells are clusters of endocrine cells that are scattered through-out 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.

CHROMOSOMAL LOCATION

Genetic locus: ICA1 (human) mapping to 7p21.3; Ica1 (mouse) mapping to 6 A1.

SOURCE

ICA69 (A-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 439-473 near the C-terminus of ICA69 of human origin.

PRODUCT

Each vial contains 200 μg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271489 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

ICA69 (A-1) is recommended for detection of ICA69 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ICA69 (A-1) is also recommended for detection of ICA69 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for ICA69 siRNA (h): sc-72102, ICA69 siRNA (m): sc-106991, ICA69 shRNA Plasmid (h): sc-72102-SH, ICA69 shRNA Plasmid (m): sc-106991-SH, ICA69 shRNA (h) Lentiviral Particles: sc-72102-V and ICA69 shRNA (m) Lentiviral Particles: sc-106991-V.
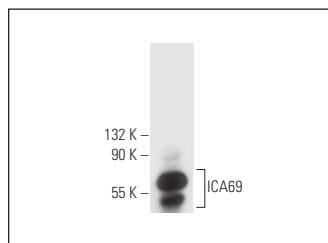
Molecular Weight of ICA69: 69 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, human pancreas extract: sc-363770 or mouse pancreas extract: sc-364244.
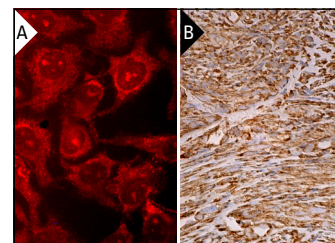
RECOMMENDED SUPPORT REAGENTS

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) Immunopre-cipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immu-nofluorescence: 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA

ICA69 (A-1): sc-271489. Western blot analysis of ICA69 expression in mouse pancreas tissue extract.

ICA69 (A-1): sc-271489. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing cytoplasmic staining of smooth muscle cells (**B**).

SELECT PRODUCT CITATIONS

1. Kong, C., et al. 2022. ICA69 aggravates ferroptosis causing septic cardiac dysfunction via STING trafficking. Cell Death Discov. 8: 187.

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.