

ICA69 (LIV3D3): sc-53362

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 μ m 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 7p22 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

- Ching, C.K. and Rhodes, J.M. 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.
- Skinner, J.R., et al. 1992. Central venous pressure in the ventilated neonate. *Arch. Dis. Child.* 67: 374-377.
- Pietro Paolo, 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.
- Hirano, K., et al. 1999. A case of non-functioning malignant islet cell tumor with egg-shaped calcification. *Nippon Shokakibyo Gakkai Zasshi* 96: 189-193.
- 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.
- Kumagai, N., et al. 2002. Vascularized islet-cell transplantation in miniature swine. I. Preparation of vascularized islet kidneys. *Transplantation* 74: 1223-1230.
- Friday, R.P., et al. 2003. Alternative core promoters regulate tissue-specific transcription from the autoimmune diabetes-related ICA1 (ICA69) gene locus. *J. Biol. Chem.* 278: 853-863.
- Helling, T.S. 2004. Surgical management of chronic pancreatitis and the role of islet cell autotransplantation. *Curr. Surg.* 60: 463-469.
- Ito, K., et al. 2004. Localization of islet-cell hyperplasia: value of pre- and intraoperative arterial stimulation and venous sampling. *J. Hepatobiliary Pancreat. Surg.* 11: 203-206.

CHROMOSOMAL LOCATION

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

SOURCE

ICA69 (LIV3D3) is a mouse monoclonal antibody raised against pancreatic cancer related serum mucin of human origin.

PRODUCT

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

APPLICATIONS

ICA69 (LIV3D3) is recommended for detection of ICA69 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ICA69 siRNA (h): sc-72102, ICA69 shRNA Plasmid (h): sc-72102-SH and ICA69 shRNA (h) Lentiviral Particles: sc-72102-V.

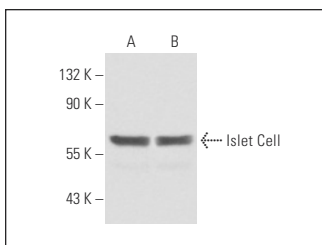
Molecular Weight of ICA69: 69 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285 or human pancreas extract: sc-363770.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Islet Cell (LIV3D3): sc-53362. Western blot analysis of Islet Cell expression in human pancreas tissue extract (A) and MIA PaCa-2 whole cell lysate (B).

STORAGE

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

RESEARCH USE

For research use only, not for use in diagnostic procedures.