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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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SANTA CRUZ BIOTECHNOLOGY, INC.

IGRP (h): 293T Lysate: sc-373081

BACKGROUND

Glucose-6-phosphatase (G6Pase), is a multicomponent enzyme system that hydrolyzes glucose-6-phosphate in the final step of gluconeogenesis and gluconeolysis. G6Pase localizes to the endoplasmic reticulum, and while liver, kidney, and intestine are the only tissues that express the first identified isoform, G6Pase-α, a second form, designated G6Pase-β, contributes to blood glucose homeostasis in a wider range of tissues. Islet-specific G-6-Pase catalytic subunit-related protein (IGRP), a homolog of the catalytic subunit of G6Pase, may play a role in the regulation of islet metabolism and in Insulin secretion induced by metabolites. The exact catalytic acivity of IGRP is not defined. Identification of inhibitors of IGRP have potential therapeutic benefits for treatment of type 2 diabetes resulting from Insulin secretion defects. Structurally, IGRP has been shown to be a glycoprotein held in the endoplasmic reticulum by nine transmembrane domains, which are then degraded in cells through the proteasome pathway generating MHC class I presented peptides.

REFERENCES

1. Arden, S.D., et al. 1999. Molecular cloning of a pancreatic islet-specific glucose-6-phosphatase catalytic subunit-related protein. Diabetes 48: 531-542.
2. Ebert, D.H., et al. 1999. Structure and promoter activity of an islet-specific glucose-6-phosphatase catalytic subunit-related gene. Diabetes 48: 543-551.
3. Martin, C.C., et al. 2001. Cloning and characterization of the human and rat islet-specific glucose-6-phosphatase catalytic subunit-related protein (IGRP) genes. J. Biol. Chem. 276: 25197-25207.
4. Petrolonis, A.J., et al. 2004. Enzymatic characterization of the pancreatic islet-specific glucose-6-phosphatase-related protein (IGRP). J. Biol. Chem. 279: 13976-13983.
5. Shieh, J.J., et al. 2004. The islet-specific glucose-6-phosphatase-related protein, implicated in diabetes, is a glycoprotein embedded in the endoplasmic reticulum membrane. FEBS. Lett. 562: 160-164.
6. Mukherjee, R., et al. 2005. Identification of $CD4^+$ T cell-specific epitopes of islet-specific glucose-6-phosphatase catalytic subunit-related protein: a novel β cell autoantigen in type 1 diabetes. J. Immunol. 174: 5306-5315.
7. Shieh, J.J., et al. 2005. In islet-specific glucose-6-phosphatase-related protein, the β cell antigenic sequence that is targeted in diabetes is not responsible for the loss of phosphohydrolase activity. Diabetologia 48: 1851-1859.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: G6PC2 (human) mapping to 2q31.1.

PRODUCT

IGRP (h): 293T Lysate represents a lysate of human IGRP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

IGRP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive IGRP antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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