

Insulin (H-86): sc-9168

BACKGROUND

Insulin is a secreted peptide hormone that elicits metabolic effects such as increases in glucose uptake and glycogen synthesis leading to a decrease in blood glucose concentration. Insulin is first formed as a precursor molecule, proinsulin, which is later cleaved to proinsulin and finally to the mature Insulin hormone. Mature Insulin consists of 51 amino acids, contained within an A chain and a B chain that are connected by 2 disulfide bridges. It increases cell permeability to monosaccharides, amino acids and fatty acids. Insulin is secreted by the pancreas at basal levels in the absence of exogenous stimuli, with secretion increasing in response to glucose. Insulin action is effected by the binding of Insulin to cell-surface receptors on the target cell membrane. Defects of Insulin are the cause of hyperproinsulinemia and of type 2 diabetes mellitus.

CHROMOSOMAL LOCATION

Genetic locus: INS (human) mapping to 11p15.5; Ins2 (mouse) mapping to 7 F5.

SOURCE

Insulin (H-86) is a rabbit polyclonal antibody raised against amino acids 25-110 of insulin of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Insulin (H-86) is recommended for detection of Insulin A and B chains, and C peptide of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Insulin (H-86) is also recommended for detection of Insulin A and B chains, and C peptide in additional species, including equine and canine.

Suitable for use as control antibody for Insulin siRNA (h): sc-39578, Insulin shRNA Plasmid (h): sc-39578-SH and Insulin shRNA (h) Lentiviral Particles: sc-39578-V.

Molecular Weight of Insulin: 12 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285.

RESEARCH USE

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

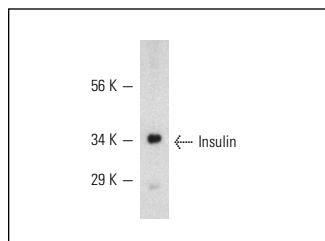
PROTOCOLS

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

STORAGE

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

DATA



Insulin (H-86): sc-9168. Western blot analysis of human recombinant Insulin.

SELECT PRODUCT CITATIONS

- Casares, S., et al. 2002. Down-regulation of diabetogenic CD4⁺ T cells by a soluble dimeric peptide-MHC class II chimera. *Nat. Immunol.* 3: 383-391.
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- Yang, L., et al. 2002. In vitro *trans*-differentiation of adult hepatic stem cells into pancreatic endocrine hormone-producing cells. *Proc. Natl. Acad. Sci. USA* 99: 8078-8083.
- Karaoz, E., et al. 2010. Isolation and characterization of stem cells from pancreatic islet: pluripotency, differentiation potential and ultrastructural characteristics. *Cytherapy* 12: 288-302.
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- Bonner, C., et al. 2011. Bone morphogenetic protein 3 controls Insulin gene expression and is down-regulated in INS-1 cells inducibly expressing a hepatocyte nuclear factor 1A-maturity-onset diabetes of the young mutation. *J. Biol. Chem.* 286: 25719-25728.
- Gómez-Pérez, Y., et al. 2011. Sex-dependent effects of high-fat-diet feeding on rat pancreas oxidative stress. *Pancreas* 40: 682-688.
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Try **Insulin (2D11-H5): sc-8033** or **Insulin (3A1): sc-52035**, our highly recommended monoclonal alternatives to Insulin (H-86).