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Datasheet for 200-301-389

Insulin Antibody

Overview

Description:	Anti-Insulin (MOUSE) Monoclonal Antibody - 200-301-389
Item No.:	200-301-389
Size:	100 µg
Applications:	Dot Blot, ELISA
Reactivity:	Human
Host Species:	Mouse

Product Details

Background:	Recognizes the 51 amino acid (6 kDa) insulin polypeptide composed of A and B chains. Proinsulin, which has very little biological activity, is cleaved by proteases within its cell of origin into the insulin molecule and the C-peptide basic residue. Insulin enhances membrane transport of glucose, amino acids, and certain acids. It also promotes glycogen storage, formation of triglycerides, and synthesis of proteins and nucleic acids. The main storage site for insulin is the pancreatic islets. Antibodies to insulin are important as b-cell and tumor (insulinoma) markers.
Synonyms:	mouse anti-insulin antibody, ILPR antibody, INS antibody, Insulin A chain antibody, Insulin B chain antibody, Insulin precursor antibody, IRDN antibody, Proinsulin antibody, Proinsulin precursor antibody
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	2D11.H5
Format:	IgG1

Target Details

Gene Name:	INS
Reactivity:	Human
Immunogen Type:	Native Protein

Immunogen:	This protein A purified monoclonal antibody was produced by repeated immunizations with purified human insulin coupled to bovine serum albumin (BSA).
Purity/Specificity:	This protein A purified mouse monoclonal antibody reacts specifically with insulin from human and swine sources. Cross reactivity with insulin from mouse and rat does not occur. Cross reactivity with insulin from other sources has not been determined.
Relevant Links:	• UniProtKB - P01308 • NCBI - P01308.1 • GeneID - 3630

Application Details

Tested Applications:	Dot Blot, ELISA
Application Note:	Mouse Anti-Insulin Antibody has been tested by ELISA and dot blot and is suitable for immunohistochemistry, immunoblotting and immunoprecipitation. Insulin has a cytoplasmic localization. Pancreatic tissue or b-cells from islets of Langerhans can be used as a positive control.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:25,000
IHC:	1:50 - 1:200
IP:	User Optimized
WB:	1:50 - 1:200

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.031 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

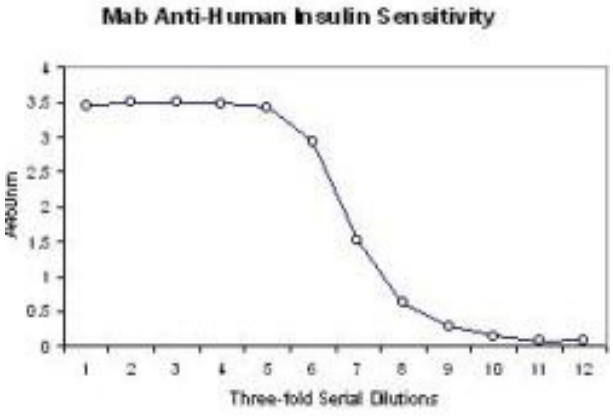
Shipping & Handling

Shipping Condition:	Dry Ice

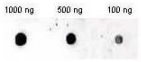
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

Diagram
Insulin is a polypeptide hormone produced by cells in the islets of Langerhans in the pancreas. Insulin decreases the levels of glucose in the blood and regulates the metabolism of glucose, fats and proteins. In order to meet the demand for insulin needed by diabetics, the hormone is mass-produced with the aid of genetically engineered bacteria, but can also be taken from pigs and cattle. The diagram to the left illustrates the structure of insulin and proinsulin. Proinsulin is a single polypeptide chain of 86 amino acids that permits correct alignment of three pairs of disulfide bonds. Insulin is derived from proinsulin by cleavage of the C-peptide structure at the dipeptides Arg-Arg and Lys-Arg. Insulin is composed of an A chain of 21 amino acids and a B chain of 30 amino acids, the chains being held together by two disulfide bonds. A third disulfide bond is present within the A chain.



ELISA
ELISA Results of Mab anti-Insulin antibody tested against human insulin by ELISA. Each well was coated with 0.1µg of conjugate. The starting concentration of antibody in the dilution series was 10 µg/ml. Each point on the Y-axis represents a 3-fold dilution. The midpoint of the titration curve represents approximately 5ng/ml antibody or a 1:200,000 dilution from the stock concentration. HRP conjugated Gt-a-Mouse IgG H&L(p/n 610-103-121) and TMB substrate were used for detection.



Dot Blot

Dot blotting. Mab anti-Insulin antibody (clone 2D11.H5) is shown to detect human insulin by dot blot. Each dot blot represents 1 µl of non-denatured human insulin at various dilutions starting at 1.0 µg/ml spotted on to nitrocellulose. A 1:400 dilution of Mab anti-Insulin is used for 2 hour followed by detection using a 1:5,000 dilution of IRDyeTM800 conjugated Goat-a-Mouse IgG [H&L] (610-132-121) reacted for 45 min at room temperature and visualization using the Odyssey® Infrared Imaging System developed by LI-COR. Other detection systems will yield similar results. IRDye is a trademark of LI-COR, Inc.

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