

**Datasheet for 200-301-389****Insulin Antibody****Overview**

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

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Background:</b>   | 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. |
| <b>Synonyms:</b>     | 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                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Host Species:</b> | Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Clonality:</b>    | Monoclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Clone ID:</b>     | 2D11.H5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Format:</b>       | IgG1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Target Details**

|                        |                |
|------------------------|----------------|
| <b>Gene Name:</b>      | INS            |
| <b>Reactivity:</b>     | Human          |
| <b>Immunogen Type:</b> | Native Protein |

|                            |                                                                                                                                                                                                                                                             |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Immunogen:</b>          | This protein A purified monoclonal antibody was produced by repeated immunizations with purified human insulin coupled to bovine serum albumin (BSA).                                                                                                       |
| <b>Purity/Specificity:</b> | 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. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">UniProtKB - P01308</a></li><li>• <a href="#">NCBI - P01308.1</a></li><li>• <a href="#">GeneID - 3630</a></li></ul>                                                                                      |

## Application Details

|                             |                                                                                                                                                                                                                                                                                       |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested Applications:</b> | Dot Blot, ELISA                                                                                                                                                                                                                                                                       |
| <b>Application Note:</b>    | 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. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                       |
| <b>ELISA:</b>               | 1:5,000 - 1:25,000                                                                                                                                                                                                                                                                    |
| <b>IHC:</b>                 | 1:50 - 1:200                                                                                                                                                                                                                                                                          |
| <b>IP:</b>                  | User Optimized                                                                                                                                                                                                                                                                        |
| <b>WB:</b>                  | 1:50 - 1:200                                                                                                                                                                                                                                                                          |

## Formulation

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

## Shipping & Handling

|                            |         |
|----------------------------|---------|
| <b>Shipping Condition:</b> | 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

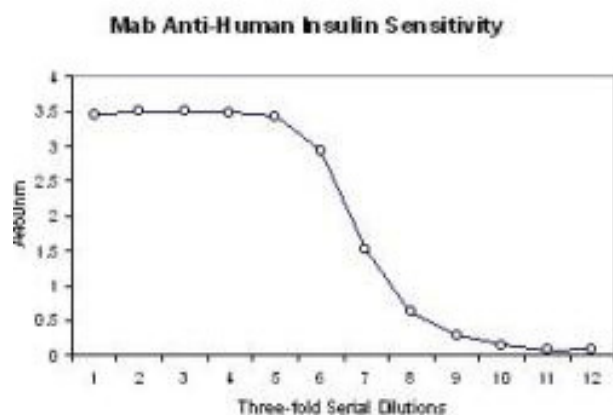


### Diagram

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  $\mu$ l of non-denatured human insulin at various dilutions starting at 1.0  $\mu$ g/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 IRDye<sup>TM</sup>800 conjugated Goat-a-Mouse IgG [H&L] (610-132-121) reacted for 45 min at room temperature and visualization using the Odyssey<sup>®</sup> Infrared Imaging System developed by LI-COR. Other detection systems will yield similar results. IRDye is a trademark of LI-COR, Inc.

## Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.