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## Insulin; Clone 2D11-H5

Catalog Number	Format	Volume
A00114-0002	(Ready-To-Use)	2 ml
A00114-0007	(Ready-To-Use)	7 ml
A00114-0025	(Ready-To-Use)	25 ml
A00114-C	(Concentrate)	1 ml

### Intended Use

For In-Vitro Diagnostic Use. This antibody is intended for the qualitative visualization of the anatomical elements listed in the Specificity section. It is intended to be used within an Immunohistochemistry (IHC) procedure on formalin-fixed paraffin-embedded (FFPE) human tissue followed by visualization by light microscopy.

### Description

**Titer/Working Dilution:** Ready-to-Use: No further dilution required.  
Concentrate: Suggested dilution is 1:250

**Species:** Mouse  
**Immunogen:** Human insulin conjugated to BSA.  
**Clone:** 2D11-H5  
**Isotype:** Mouse IgG1, Kappa  
**Format:** Ready-To-Use antibody has been pre-titered and quality controlled to work on formalin-fixed paraffin-embedded as well as acetone fixed cryostat tissue sections. No further titration is required.  
Concentrate antibody is provided in a phosphate buffered saline containing 1% BSA.

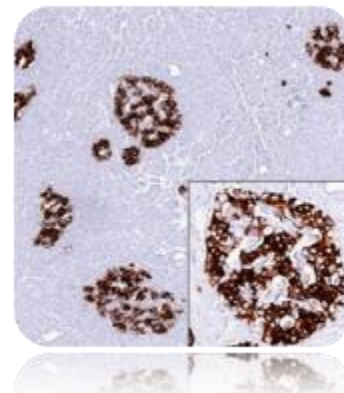
**Specificity:** Detects insulin and insulin producing cells.

**Background:** Insulin is a secreted peptide hormone produced by the pancreas that regulates carbohydrate and lipid metabolism. Insulin is released from the pancreatic beta cells of the islets of Langerhans in response to secretagogues. Following its release, insulin quickly acts to both inhibit hepatic glucose production and stimulate peripheral blood glucose utilization. During this process cells in the liver, muscle, and fat are triggered to take up glucose and store it as glycogen, resulting in a decrease of blood glucose levels.

From a clinical standpoint, the glucose lowering effect of insulin is its most relevant property. Insulin dysregulation, including insulin resistance, is associated with a number of pathological conditions such as diabetes, insulinoma, metabolic syndrome and polycystic ovary syndrome. Insulin is used to treat some forms of diabetes.

Although antibody or auto-antibody against insulin isn't normally found in the blood, antibody may be produced in certain conditions including following an allergic response to insulin treatment for diabetes: IgG, IgM, and IgE antibody have all been described. The presence of auto-antibody, identified by an insulin antibody test, may have clinical significance by contributing to or causing insulin dysregulation.

**Species Reactivity:** Human, Pig, Cow.  
**Positive Control:** Pancreatic Tissue.  
**Cellular Localization:** Cytoplasmic.  
**Microbiological State:** Nonsterile



### Materials and Reagents Required but not Provided

- Control tissue and reagents
- Xylene, graded alcohols, and deionized/distilled water
- Antibody Diluent.
- IHC detection system. Suggested: ScyTek Cat# ABZ125 "CRF Anti-Polyvalent HRP Polymer" and ScyTek Cat# ACV500 "DAB Chromogen/Substrate Kit (High Contrast)".
- Wash buffer for rinses (ScyTek Cat# TBT500)
- HIER Retrieval Solution
- Hematoxylin counterstain and bluing reagent (ScyTek Cat# HMM500 and BRT500)
- Mounting medium and coverslips

**Note:** ScyTek Laboratories has a wide range of IHC reagents and ancillaries that can be found at [scytek.com](http://scytek.com).

### Procedure

1. **Tissue Section Pretreatment (Highly Recommended):** Staining of formalin fixed paraffin embedded tissue sections is significantly enhanced by pretreatment with Tis-EDTA HIER Solution (10x) pH 9.0 (ScyTek catalog# TES500) or Citrate Plus (10x) HIER Solution (ScyTek catalog# CPL500)

2. **Primary Antibody Incubation Time:** We suggest an incubation period of 30 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation should be determined by the user.

3. **Visualization:** For maximum staining intensity we recommend the "UltraTek HRP Anti-Polyvalent Lab Pack" (ScyTek catalog# UHP125, see IFU for instructions) combined with the "DAB Chromogen/Substrate Bulk Pack (High Contrast)" (ScyTek catalog# ACV500, see IFU for instructions).

### Storage and Stability

Do not Freeze. Store at 2-8°C. Return to 2-8° immediately after use. Do not use after expiration date printed on label. Verify visually that antibody has not been contaminated before use. Do not use if reagent becomes cloudy or precipitates.

### Limitations

Immunohistochemistry is a complex technique involving both histological and immunological detection methods. Tissue processing and handling prior to immunostaining can cause inconsistent results. Variations in fixation and embedding or the inherent nature of the tissue specimen may cause variations in results. Endogenous peroxidase activity or pseudoperoxidase activity in erythrocytes and endogenous biotin may cause non-specific staining depending on detection system used. This data sheet's recommendations and procedures were validated using ScyTek IHC reagents and may not be suitable for other detection systems.

Storage: 2° C  8° C

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CE

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**Precautions**



1. Contains Sodium Azide as a preservative (0.09% w/v), do not ingest. Sodium Azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. This product contains no hazardous material at a reportable concentration according to U.S. 29 CFR 1910.1200, OSHA Hazardous Communication Standard and EC Directive 91/155/EC.
2. Do not pipette by mouth.
3. Avoid contact of reagents and specimens with skin and mucous membranes.
4. Avoid microbial contamination of reagents or increased nonspecific staining may occur.
5. The user must validate any procedures and recommendations that differ from this data sheet.
6. The SDS may be found at [scytek.com](http://scytek.com)

**References**

1. Ardeleanu et al. Appl Immunohistochem Mol Morphol 17:413-418 (2009).
2. Poncet et al. J Gastrointest Surg. 15:101-109 (2011).
3. Walter et al. Virchows Archiv 458:537-546 (2011).
4. Sato et al. Pathol Res Prac 206:397-400 (2010).

**Warranty**

No products or "Instructions For Use (IFU)" are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our IFU or website. Our warranty is limited to the actual price paid for the product. ScyTek Laboratories, Inc. is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

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