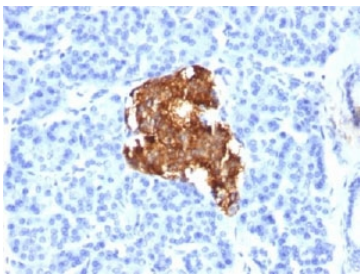
Insulin Antibody E2-E3 / INS04 Antibody [clone E2-E3 or INS04] (V2157)

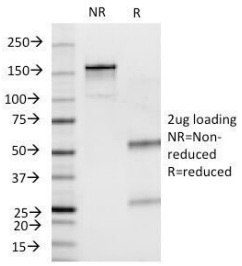
Catalog No.	Formulation	Size
V2157-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2157-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2157SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2157IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Species Reactivity	Human, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	E2-E3 or INS04
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	3630
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 0.5-1ug/ml for 30 min at RT
Limitations	This Insulin Antibody E2-E3 / INS04 Antibody is available for research use only.



Insulin Antibody E2-E3 Staining in Human Pancreatic Islets by IHC. Immunohistochemistry staining of human pancreas using Insulin Antibody (clone E2-E3) shows strong brown cytoplasmic labeling concentrated within a pancreatic islet, while the surrounding exocrine tissue shows minimal staining. The sharply localized pattern is consistent with insulin expression in pancreatic beta cells and demonstrates detection of insulin in human pancreatic tissue sections using this INS04 Antibody.



Insulin Antibody E2-E3 / INS04 Purity and Integrity by SDS-PAGE. SDS-PAGE analysis of 2 ug purified, BSA-free Insulin Antibody (clone E2-E3, also designated INS04) shows the intact antibody migrating at approximately 150 kDa under non-reducing conditions. Under reducing conditions, distinct immunoglobulin heavy and light chains are visible at approximately 50 kDa and 25 kDa, respectively. The expected non-reduced and reduced migration patterns support the integrity and purity of the antibody preparation.

Description

Insulin Antibody E2-E3 recognizes insulin, a peptide hormone that plays a central role in glucose homeostasis and metabolic regulation. Insulin is produced primarily by pancreatic beta cells and is initially synthesized as preproinsulin. Following removal of the signal peptide, proinsulin undergoes further proteolytic processing to generate mature insulin and C-peptide. Mature insulin consists of A and B chains connected by disulfide bonds and is stored in secretory granules until released in response to metabolic signals such as increased blood glucose.

Insulin acts through the insulin receptor to regulate carbohydrate, lipid, and protein metabolism. Insulin receptor signaling promotes glucose uptake in responsive tissues, stimulates glycogen and lipid synthesis, and influences pathways involved in cellular growth and metabolic homeostasis. Abnormalities affecting insulin production, secretion, or action are central to diabetes mellitus and related metabolic disorders, making insulin an important target in endocrine and metabolism research.

Within the pancreas, insulin expression is strongly associated with beta cells of the islets of Langerhans. This characteristic localization makes insulin an established marker for studying pancreatic beta-cell identity, development, differentiation, and function. Insulin expression is also investigated in pancreatic neuroendocrine tumors, particularly insulin-producing tumors, supporting research into beta-cell lineage and insulinoma biology.

Clone E2-E3 is a mouse monoclonal antibody generated against purified full-length porcine insulin and is also designated INS04. This INS04 Antibody provides a defined reagent for investigating insulin expression and complements other monoclonal antibodies used in pancreatic beta-cell and endocrine research. NSJ Bioreagents supplies clone E2-E3 for research use only.

An Insulin Antibody can be used to investigate insulin expression and its relationship to pancreatic beta-cell biology, endocrine function, glucose regulation, metabolic research, and insulin-producing tumors.

For a highly published insulin monoclonal with an alternate INS05 clone designation, see our Insulin Antibody 2D11-H5 / INS05 Antibody page.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Insulin Antibody E2-E3 / INS04 Antibody to be titered up or down for optimal performance.

1. No special pretreatment is required for staining of formalin/paraffin tissues.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Full length purified pig Insulin (aa 1-84) was used as the immunogen for this Insulin Antibody E2-E3.

Storage

Store the Insulin Antibody E2-E3 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

INS antibody, INS04 antibody, insulin beta-cell marker antibody, beta-cell marker antibody, insulinoma marker antibody, IRDN antibody, IDDM2 antibody, ILPR antibody, MODY10 antibody, proinsulin antibody

References (2)

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