

Datasheet: 5330-0104G

Description:	GUINEA PIG ANTI PIG INSULIN
Specificity:	INSULIN
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	50 µl

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			1/50 - 1/1600
Immunohistology - Paraffin	▪			
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting			▪	
Functional Assays			▪	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Pig

Species Cross Reactivity

Reacts with: Mouse, Human

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG - liquid

Antiserum Preparation

Antisera to pig insulin were raised by repeated immunisations of Guinea Pigs with highly purified antigen. Ig fraction prepared from whole serum by ammonium sulphate precipitation.

Buffer Solution	Phosphate buffered saline.
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 5.0mg/ml
Immunogen	Native.
External Database Links	<p>UniProt: P01315 Related reagents</p> <p>Entrez Gene: 397415 INS Related reagents</p>
RRID	AB_1605150
Specificity	<p>Guinea pig anti Pig insulin antibody recognizes porcine insulin, a hormone secreted by the beta cells of the islets of Langerhans in the pancreas. Insulin belongs to a family of hormones including the insulin-like growth hormones and the relaxins. The insulin precursor is a 108 amino acid polypeptide consisting of a 24 aa signal peptide, an insulin A chain, a prohormone polypeptide (also known as the 'C chain') and an insulin B chain together having a predicted molecular mass of 11,672 Da. Active insulin migrates with an apparent molecular mass of ~6 kDa in western blotting of porcine, bovine and lapine samples (Schechter <i>et al.</i> 1992).</p> <p>Insulin is a hormone that functions in carbohydrate homeostasis, and acts to decrease blood glucose concentration by increasing cell permeability to monosaccharides, amino acids and fatty acids, and accelerate glycolysis and glycogen synthesis in the liver, it induces uptake of glucose into cells through its interaction with the glucose transporter GLUT4 (Watson and Pressin 2001). Deficiency of insulin results in diabetes mellitus, one of the leading causes of morbidity and mortality in the general population. Insulin is also present in tumours of B-cell origin such as insulinoma (Schiel <i>et al.</i> 2006).</p> <p>Guinea pig anti Pig insulin antibody has been successfully used to demonstrate the presence of insulin in the islets of Langerhans of murine pancreas using immunohistochemistry on paraffin embedded material (Ortsäter <i>et al.</i> 2012).</p>
Histology Positive Control Tissue	Pancreas.
References	<ol style="list-style-type: none"> 1. Ortsäter, H. <i>et al.</i> (2012) Diet supplementation with green tea extract epigallocatechin gallate prevents progression to glucose intolerance in db/db mice. Nutr Metab (Lond). 9: 11. 2. Izumi, K. <i>et al.</i> (2015) Reduced Tyk2 gene expression in β-cells due to natural mutation determines susceptibility to virus-induced diabetes. Nat Commun. 6: 6748. 3. Tian, J. <i>et al.</i> (2019) A Clinically Applicable Positive Allosteric Modulator of GABA

Receptors Promotes Human β -Cell Replication and Survival as well as GABA's Ability to Inhibit Inflammatory T Cells [J Diabet Res. 2019, Article ID 5783545, 7 pages.](#)

Storage	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Guinea Pig IgG (H/L) (AHP863...) [HRP](#)

Recommended Useful Reagents

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)

[100x ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

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