

# Biotin Conjugated Anti-Insulin Antibody [PSH04-16] - Detector

## HA722610B



<b>Product Type:</b>	Recombinant Rabbit monoclonal IgG, primary antibodies
<b>Species reactivity:</b>	Human, Mouse, Rat
<b>Applications:</b>	ELISA(Det), ELISA
<b>Clone number:</b>	PSH04-16

**Description:** This gene encodes insulin, a peptide hormone that plays a vital role in the regulation of carbohydrate and lipid metabolism. After removal of the precursor signal peptide, proinsulin is post-translationally cleaved into three peptides: the B chain and A chain peptides, which are covalently linked via two disulfide bonds to form insulin, and C-peptide. Binding of insulin to the insulin receptor (INSR) stimulates glucose uptake. A multitude of mutant alleles with phenotypic effects have been identified, including insulin-dependent diabetes mellitus, permanent neonatal diabetes mellitus, maturity-onset diabetes of the young type 10 and hyperproinsulinemia. There is a read-through gene, INS-IGF2, which overlaps with this gene at the 5' region and with the IGF2 gene at the 3' region. Insulin decreases blood glucose concentration. It increases cell permeability to monosaccharides, amino acids and fatty acids. It accelerates glycolysis, the pentose phosphate cycle, and glycogen synthesis in liver.

<b>Conjugate:</b>	Biotin-conjugated
<b>Immunogen:</b>	Recombinant protein within human Insulin aa 15-110.
<b>Positive control:</b>	Recombinant Human Insulin protein (HA211183).
<b>Subcellular location:</b>	Secreted.
<b>Database links:</b>	SwissProt: P01308 Human

### Recommended Dilutions:

<b>ELISA(Det)</b>	Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH04-15] to Insulin antibody (Capture) (HA722096) and Recombinant Human Insulin protein (HA211183) as the standard. The reference range value is 62.5-4,000 pg/mL.
<b>ELISA</b>	Use at an assay dependent concentration.

<b>Storage Buffer:</b>	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% ProClin300.
<b>Storage Instruction:</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.
<b>Purity:</b>	Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

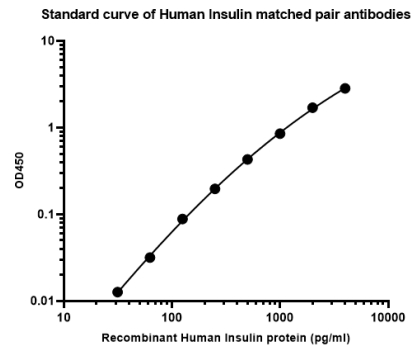
Service mail:support@huabio.cn

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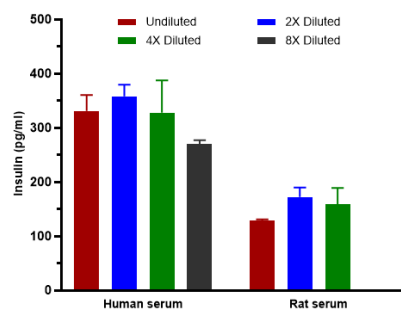
**Fig1:** Sandwich ELISA analysis of Human Insulin matched pair antibodies

Capture: HA722096, Human Insulin Rabbit mAb [PSH04-15]  
Detector: HA722097, Human Insulin Rabbit mAb [PSH04-16]



Elisa assay was performed by coating wells of a 96-well plate with 50  $\mu$ l per well of capture antibody (HA722096) diluted in carbonate/bicarbonate buffer, at a concentration of 5  $\mu$ g/ml overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150  $\mu$ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant human Insulin (HA211183) protein starting from 4,000 pg/ml to 0 pg/ml and detect antibody (HA722097, Biotin, 0.2  $\mu$ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 50  $\mu$ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

**Fig2:** Interpolated concentrations of native Insulin in human serum and rat serum.



Capture: HA722096, Human Insulin Rabbit mAb [PSH04-15]  
Detector: HA722097, Human Insulin Rabbit mAb [PSH04-16]

The concentrations of Insulin were measured in duplicates, interpolated from the Insulin standard curve and corrected for sample dilution. Undiluted samples are human serum 50% and rat serum 25%. The interpolated dilution factor corrected values are plotted (mean  $\pm$  SD, n=2). The mean Insulin concentration was determined to be 644 pg/ml in human serum and 614 pg/ml in rat serum.

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**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

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### Background References

1. Johansson U et al. Pancreatic Islet Survival and Engraftment Is Promoted by Culture on Functionalized Spider Silk Matrices. PLoS One 10:e0130169 (2015).
2. Hoelen H et al. Proteasomal Degradation of Proinsulin Requires Derlin-2, HRD1 and p97. PLoS One 10:e0128206 (2015).

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