

Product datasheet

Human Insulin ELISA Kit ab100578

★★★★☆ 3 Abreviews 27 References 5 Images

Overview

Product name	Human Insulin ELISA Kit
Detection method	Colorimetric
Sample type	Cell culture supernatant, Serum, Plasma
Assay type	Sandwich (quantitative)
Sensitivity	< 4 µIU/ml
Range	4.69 µIU/ml - 300 µIU/ml
Recovery	89 %

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	76.16	68% - 88%
Serum	91.4	83% - 102%
Plasma	99.03	73% - 128%

Assay duration Multiple steps standard assay

Species reactivity **Reacts with:** Human

Predicted to work with: Mouse, Rat, Cow, Pig

Product overview

Abcam's Human Insulin ELISA (Enzyme-Linked Immunosorbent Assay) kit is an *in vitro* enzyme-linked immunosorbent assay for the quantitative measurement of Human Insulin and Proinsulin in serum, plasma, cell culture supernatants.

This assay employs an antibody specific for Human Insulin coated on a 96-well plate. Standards and samples are pipetted into the wells and Insulin present in a sample is bound to the wells by the immobilized antibody. The wells are washed and biotinylated anti-Human Insulin antibody is added. After washing away unbound biotinylated antibody, HRP-conjugated streptavidin is pipetted to the wells. The wells are again washed, a TMB substrate solution is added to the wells and color develops in proportion to the amount of Insulin bound. The Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm.

This kit detects both insulin and proinsulin.

Get higher sensitivity in only 90 minutes with Human Insulin ELISA Kit ([ab200011](#)) from our SimpleStep ELISA® range.

Notes Optimization may be required with urine samples.

Platform Microplate

Properties

Storage instructions Store at -20°C. Please refer to protocols.

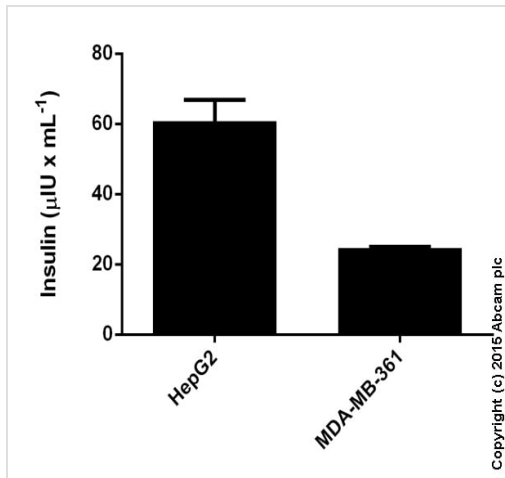
Components	1 x 96 tests
20X Wash Buffer	1 x 25ml
500X HRP-Streptavidin Concentrate	1 x 200µl
5X Assay Diluent B	1 x 15ml
Assay Diluent A	1 x 30ml
Biotinylated anti-Human Insulin	2 vials
Insulin Microplate (12 strips x 8 wells)	1 unit
Recombinant Human Insulin Standard (lyophilized)	2 vials
Stop Solution	1 x 8ml
TMB One-Step Substrate Reagent	1 x 12ml

Function 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.

Involvement in disease Defects in INS are the cause of familial hyperproinsulinemia (FHPRI) [MIM:176730]. Defects in INS are a cause of diabetes mellitus insulin-dependent type 2 (IDDM2) [MIM:125852]. IDDM2 is a multifactorial disorder of glucose homeostasis that is characterized by susceptibility to ketoacidosis in the absence of insulin therapy. Clinical features are polydipsia, polyphagia and polyuria which result from hyperglycemia-induced osmotic diuresis and secondary thirst. These derangements result in long-term complications that affect the eyes, kidneys, nerves, and blood vessels. Defects in INS are a cause of diabetes mellitus permanent neonatal (PNDM) [MIM:606176]. PNDM is a rare form of diabetes distinct from childhood-onset autoimmune diabetes mellitus type 1. It is characterized by insulin-requiring hyperglycemia that is diagnosed within the first months of life. Permanent neonatal diabetes requires lifelong therapy. Defects in INS are a cause of maturity-onset diabetes of the young type 10 (MODY10) [MIM:613370]. MODY10 is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.

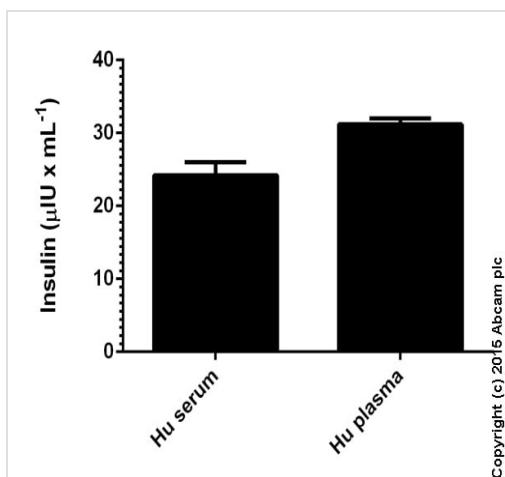
Sequence similarities Belongs to the insulin family.

Images



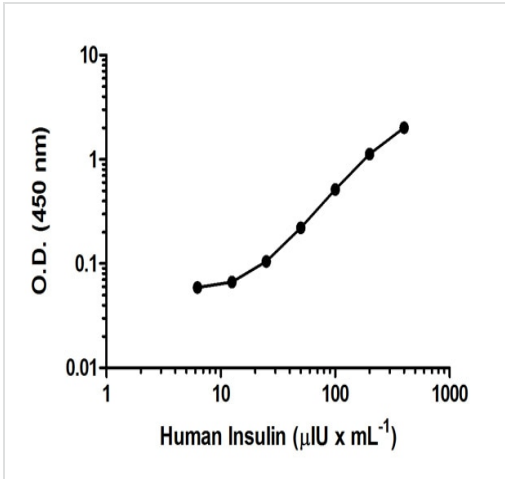
Human Insulin measured in cell culture supernatants showing quantity (μU) per mL of tested sample. Samples diluted 1-2 fold.

Sandwich ELISA - Insulin Human ELISA Kit
(ab100578)



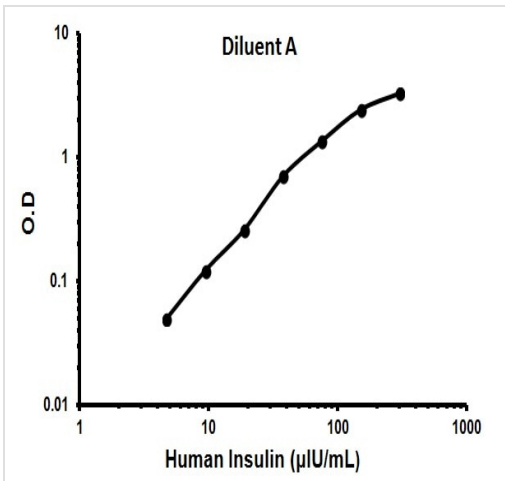
Human Insulin measured in biological fluids showing quantity (μU) per mL of tested sample. Samples diluted 1-6 fold.

Sandwich ELISA - Insulin Human ELISA Kit
(ab100578)



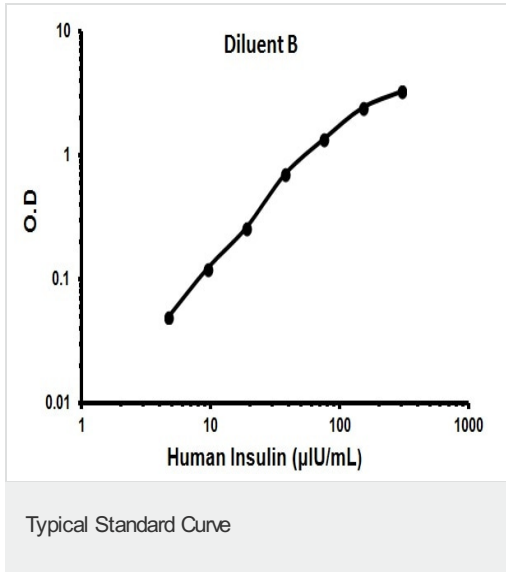
Human Insulin standard curve: mean of duplicates (+/- SD), performed in Diluent A

Sandwich ELISA - Insulin Human ELISA Kit
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Representative Standard Curve using ab100578.

Typical Standard Curve



Representative Standard Curve using ab100578.

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