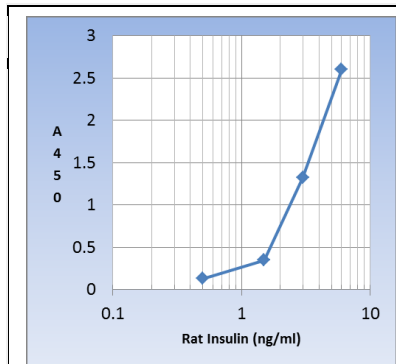


Rat Insulin ELISA Kit, High sensitivity, Cat# 0030-50-1 (96 tests) and #0030-50-10 (10x96 tests)

The Rat INSULIN ELISA Kit is a highly sensitive sandwich ELISA for the measurement of mouse insulin in serum, plasma, body fluids, tissue lysates or cell culture supernatants. The test required only 10 ul (or 5 ul) samples and assay time of 135 mins at room temperature.



Rat INSULIN ELISA Kit Features

- Anti-Rat insulin IgG pre-coated, stabilized, ready-to-use 96-well strip plate, suitable for multiple runs over 6-12 months.
 - Rat INSULIN standards (0, 0.2, 0.5, 1.5, 3.0, 6.0 ng/ml). 1 ng=0.174 fmol.
 - 10 ul (5 ul can be adapted) samples (serum or plasma)
 - **2hrs, 15 mins.** 2 incubation steps at room temp.
 - Sensitivity~150 pg/ml;
 - Storage (2-4°C) , Shelf life : 12-18 months
- Contains all necessary reagents. For in vitro research use only.

Assay Procedure: Allow all reagents to reach room temperature. Arrange and label required number of strips.

- Step 1.** Pipet **10 ul each** of calibrators and samples into wells.
- Step 2.** **Aspirate or remove well contents and add 100 ul of conjugate** to all wells. Incubate on a shaker at room temperature for **2 hrs.**
- Step 3.** **Aspirate and wash 4-6X** with 300 ul wash buffer
- Step 4.** Add **200 ul of TMB Substrate** solution to all wells, mix gently, and incubate at RT for **15 min.** Blue color develops in positive wells.
- Step 5.** Pipet **50 ul of stop solution** into each well and mix gently (blue color turns yellow). **Measure at 450 nm.** Determine insulin concn in each sample using the standards (results are expressed in ng/ml).

Calculation of Results

Calculations: Calculate the Net A450 values of the duplicate (deduct zero values). Plot the mouse insulin concentration versus the net A450 using a 4-point log-log curve. Calculate the samples values from the standard curve.

Recovery: Spike recovery 85-95% **Dilution recovery:** 85-110%

Hook Effect: No hook effect with high insulin concn up to 500 ng/ml.

Precision: Intrassay (2.8-5.2 CV%) Inter-assay (4.5-10.5 CV%).

Species reactivity: No significant reactivity IGF1 and IGFII, mouse/rat C-peptide I, II. Significant crossreactivity of 100% or more with ovine, porcine, and human insulin. Mouse and bovine showed ~75% crossreactivity. Other species not tested.

General Information

Insulin is the principal hormone responsible for the control of glucose metabolism. It is synthesized in the β -cells of the islets of Langerhans as the precursor, proinsulin, which is processed to form C-peptide and insulin. Both are secreted in equimolar amounts into the portal circulation. The mature insulin molecule comprises two polypeptide chains, the A chain and the B chain. The two chains are linked together by two inter-chain disulphide bridges. There is also an intra-chain disulphide bridge in the A chain. Secretion of insulin is mainly controlled by plasma glucose concentration, and the hormone has a number of important metabolic actions. Its principal function is to control the uptake and utilization of glucose in peripheral tissues via the glucose transporter. This and other hypoglycemic activities, such as the inhibition of hepatic gluconeogenesis and glycogenolysis are counteracted by the hyperglycemic hormones including glucagon, epinephrine (adrenaline), growth hormone and cortisol.

Related Items

Catalog#	Product Description
0030-10-B1	Bovine Insulin ELISA Kit, 96 tests, Quantitative, 96 tests, Quantitative
0030-20-I	Human Insulin-Biotin ELISA Kit, 96 tests, Quantitative, 96 tests, Quantitative
0030-40-1	Mouse Insulin ELISA Kit, High Sensitivity, 96 tests
0030-40-10	Mouse Insulin ELISA Kit, High Sensitivity, 10x 96 tests
0030-50-1	Rat Insulin ELISA Kit, High Sensitivity, 96 tests
0030-50-10	Rat Insulin ELISA Kit, High Sensitivity, 10x 96 tests
0030-60-1	Mouse/Rat Proinsulin ELISA Kit, High Sensitivity, 96 tests
0030-70-1	Mouse/Rat C-Peptide ELISA Kit, High Sensitivity, 96 tests
0030N	Human Insulin ELISA Kit, 96 tests, Quantitative, 96 tests, Quantitative
0035-IA	Human Insulin & Insulin Analogs (Lispro/Humalog, Aspart, Glargine, Glulisine, Determir) ELISA Kit, 96 tests,
0040	Human C-peptide ELISA Kit, 96 tests, Quantitative
0030-50-1-flr	140116A

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