

# Ultra Sensitive Rat Insulin ELISA Kit

Cat. #M1103



## 【Intended Use】

The Ultra Sensitive Rat Insulin ELISA kit is for the quantitative determination of insulin in rat serum, plasma, and fluid. Please read the complete kit insert before performing this assay. The kit is for *RESEARCH USE ONLY*. It is not intended for use in clinical or diagnostic procedures or for internal or external use in humans or animals.

## 【Introduction】

Insulin is the primary hormone produced in the  $\beta$  cells of the Islets of Langerhans, and is known not only to regulate glucose metabolism, *i.e.* the uptake of blood glucose to the liver and peripheral tissues, but also play other important physiological roles.

Recent increases in the incidence of diabetes and obesity have stimulated intensive research on insulin levels and production. As a result, the accurate measurement of insulin in experimental animals is becoming increasingly important. The kit is a simple, precise, and sensitive ELISA sandwich assay for rat insulin.

## 【Assay flow】

### Preparation of standard and samples

↓ Dispense 95 $\mu$ L of Sample Diluent per well. Pipette 5 $\mu$ L of the sample (or working rat insulin standard) per well.

### First reaction

↓ 4°C, 2 hours.

### Second reaction

↓ Room Temperature, 30 minutes.

### Enzyme reaction

↓ Room Temperature, 40minutes in dark.  
Stop enzyme reaction.

### Measurement of absorbance

## 【Precision】

The intra-assay precision (C.V.) :  $\leq 10\%$   
The inter-assay precision (C.V.) :  $\leq 10\%$   
The Lot to Lot precision (C.V.) :  $\leq 10\%$

## 【Characteristics of Kit】

- **Sample size**  
Only 5 $\mu$ L
- **Sample**  
Serum, plasma, or fluid
- **Test**  
96 wells (8 wells x 12 modules)
- **Reagents**  
In liquid form (except standard)
- **Assay range**  
0.1-6.4ng/mL, 0.1-12.8ng/mL\*  
\* Intended for screening purpose
- **Assay time**  
Same day procedure
- **Recovery**  
When rat insulin was spiked to rat serum,  
the recovery of rat insulin was 100%  $\pm$  10%

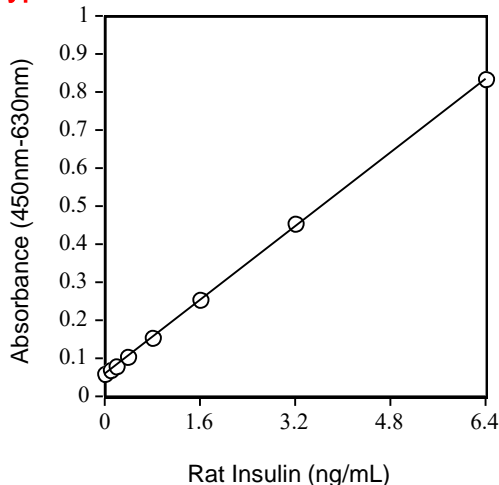
## 【Specificity】

Substance	Reactivity
Rat Insulin	100%
Mouse Insulin	100%*
Hamster Insulin	Detected*
Rat C-peptide	Not Detected
Rat pancreatic polypeptide	Not Detected
Porcine glucagon	Not Detected
Human Insulin like growth factor-I	Not Detected
Human Insulin like growth factor-II	Not Detected

\*Can vary from lot to lot.

Additional specificity data are available. In need, please contact to Morinaga Institute of Biological Science, Inc.

## 【Typical Standard】



	Name of component	Content	Quantity
A	Antibody-coated microplate module (One module consists of 8 wells)	6 modules / pack	2 packs
B	Rat Insulin Standard, Lyophilized	2.56ng/vial	1 vial
C	Anti-Insulin Enzyme Conjugate Stock Solution	8 mL	1 bottle
D	Enzyme Conjugate Diluent	4 mL	1 bottle
E	Enzyme Substrate (TMB) Solution*	13 mL	1 bottle
F	Enzyme Reaction Stop Solution (1 N Sulfuric Acid)	13 mL	1 bottle
G	Sample Diluent	30 mL	1 bottle
H	Wash Buffer Stock Solution (20X Concentrate)	50 mL	1 bottle
	Frame for affixing the microplate well module		1 piece
	Plastic microplate cover		1 piece

TMB solution\* : Avoid exposure to light.

## 【Other required reagents and instruments】

Micropipettes and disposable tips  
 Volumetric flasks  
 Distilled or deionized water  
 Polypropylene microtubes  
 Test tube racks  
 Vortex mixer  
 Aspirator for washing procedure  
 Microplate reader  
 (capable of measuring A450 and A630 values)

## 【Contact us】

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