

# Mouse/Rat Leptin ELISA Kit

Cat. #M1305



## 【Intended Use】

The Mouse/Rat Leptin ELISA kit is designed for the quantitative determination of leptin in mouse or 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】

Obesity is a significant contributing factor in various adult diseases such as diabetes, cardiac disease, etc. This fact, combined with the increasing prevalence of obesity in the human population, has resulted in increased research on the underlying impact and cause of obesity.

In 1994, leptin, *obese gene product*, was identified from the investigation of ob/ob mouse. Leptin is a protein of about 16 kDa, which is expressed in adipose tissue, and promotes weight loss by suppressing the appetite and stimulating the metabolism. As a result, the accurate measurement of leptin in experimental animals is becoming increasingly important as obesity research intensifies. The kit is a simple, precise, and sensitive ELISA sandwich assay for mouse and rat leptin.

## 【Assay flow】Regular assay (0.2–12.8ng/mL)

### Preparation of standard and samples

↓ Dispense 45  $\mu$  L of Sample Diluent per well.  
Dispense 50  $\mu$  L of guinea pig anti-leptin serum per well.  
Pipette 5  $\mu$  L of the sample (or working leptin standard) per well.

### First reaction

↓ 4° C, 16–20 hours.

### Second reaction

↓ 4° C, 3 hours.

### Enzyme reaction

↓ Room Temperature, 30 minutes 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

Regular assay : 0.2–12.8 ng/mL

Short time assay : 0.4–25.6 ng/mL

### ● Assay time

Regular assay : Over night procedure

Short time assay : 4 h 30 min

### ● Recovery

When mouse or rat leptin was spiked to serum, the recovery of leptin was 100%  $\pm$  20%

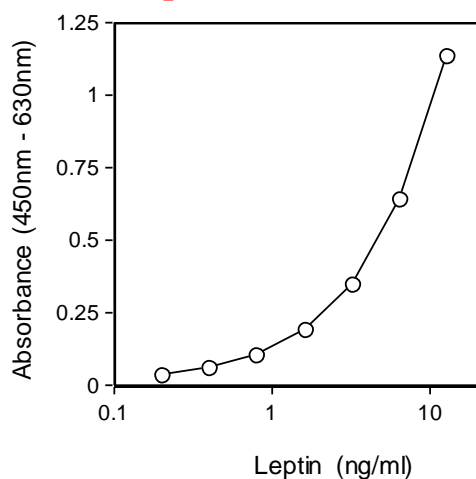
## 【Specificity】

Substance	Reactivity
r-Mouse Leptin	100%
r-Rat Leptin	100%*
r-Human Leptin	40%*
Mouse Insulin	Not Detected
Rat C-peptide	Not Detected
Rat pancreatic polypeptide	Not Detected
Porcine glucagon	Not Detected
r-Human Insulin like growth factor-I	Not Detected
r-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】



## 【Kit component】

	Name of component	Content	Quantity
A	Antibody-coated Microplate (One pack contains 6x8 well modules)	6 modules / pack	2 packs
B1	Mouse Leptin Standard, Lyophilized	2.56ng	1 vial
B2	Rat Leptin Standard, Lyophilized	2.56ng	1 vial
C	Sample Diluent	50 mL	1 bottle
D	Guinea Pig Anti-Leptin Serum	6 mL	1 bottle
E	Anti-Guinea Pig IgG Enzyme Conjugate Stock Solution	8.4 mL	1 bottle
F	Enzyme Conjugate Diluent	3.6 mL	1 bottle
G	Enzyme Substrate (TMB) Solution	13 mL	1 bottle
H	Enzyme Reaction Stop Solution (1 N Sulfuric acid)	13 mL	1 bottle
I	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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