



Guinea pig leptin (LEP) ELISA kit (0.156-10 ng/mL)

Cat. No.:	0126WXX-801
Assay Type:	Quantitative sandwich ELISA
Target Species:	Guinea pig
Assay Target:	LEP
Size:	48T; 96T

This product is for research use only and is not intended for diagnostic use.

Product Overview

Description

Guinea pig leptin (LEP) ELISA kit (0.156-10 ng/mL) is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of LEP in guinea pig samples with a range of 0.156-10 ng/mL and a minimum detectable dose (sensitivity) of 0.05 ng/mL. The kit is highly sensitive and easy to use.

Assay Principle

This double-antibody sandwich ELISA features a microplate pre-coated with a guinea pig LEP monoclonal antibody. Samples and a biotin-labeled polyclonal detection antibody are incubated in the wells and washed with PBS or TBS. Subsequently, avidin-peroxidase conjugates are added. Following a final wash, a TMB substrate facilitates color development, turning blue under peroxidase activity and shifting to yellow after acidification. The color intensity is positively correlated with the concentration of LEP in the sample.

**Background**

LEP is a hormone that plays a crucial role in regulating body fat. Secreted by fat cells, it functions as part of a signaling pathway that controls the extent of fat storage in the human body. This protein belongs to the leptin family and possesses dual functions as both a growth factor and a hormone. LEP's primary functions include: regulating food intake, controlling energy expenditure, participating in glucose homeostasis regulation, modulating adipocyte differentiation, and influencing fatty acid metabolism. Obesity research frequently focuses on deciphering the mechanisms of leptin resistance and developing countermeasures, including the development of drugs that enhance brain sensitivity to leptin or the exploration of alternative pathways for regulating appetite and energy balance. Understanding leptin-mediated signaling pathways is central to this research.

Synonyms

OB; OBS; Obesity Homolog; Obesity Factor; Obese Protein

Formula Weight

18,641 Da

Applications

Guinea pig leptin (LEP) ELISA kit (0.156-10 ng/mL) is used to quantify LEP in guinea pig serum, plasma, cell culture supernatant, and organizations of guinea pig, providing data to support research in a wide range of areas, including metabolic pathway, endocrinology, cardiovascular biology, obesity, etc.

Research Area

Metabolic pathway; Endocrinology; Cardiovascular biology; Obesity

Specification

Sample Type

Guinea pig serum; Plasma; Cell culture supernatant; Organizations

Detection Range

0.156-10 ng/mL

Sensitivity

0.05 ng/mL

Precision (Intra-assay)

CV \leq 8%

Precision (Inter-assay)

CV \leq 12%

Cross-reactivity

No significant cross-reactivity or interference was observed.

Storage

Store at 2-8°C.