



Bovine leptin (LEP) ELISA kit (3.12-50 ng/mL)

Cat. No.:	0126WXX-789
Assay Type:	Quantitative competitive ELISA
Target Species:	Bovine
Assay Target:	LEP
Size:	24T; 48T; 96T

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

Product Overview

Description

Bovine leptin (LEP) ELISA kit (3.12-50 ng/mL) is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of LEP in porcine samples with a range of 3.12-50 ng/mL and a minimum detectable dose (sensitivity) of <3.12 ng/mL. The kit is highly sensitive and easy to use.

Assay Principle

This assay employs a competitive inhibition enzyme immunoassay technique. The microtiter plate is pre-coated with an antibody specific to LEP. A competitive reaction is initiated between the LEP in the sample (or standards) and a fixed amount of biotin-conjugated LEP for the limited antibody binding sites. As the concentration of LEP in the sample increases, the amount of biotin-conjugated LEP bound to the plate decreases. Following a wash step, avidin-HRP is added. The resulting color development after substrate addition is inversely proportional to 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

18,716 Da

Applications

Bovine leptin (LEP) ELISA kit (3.12-50 ng/mL) is used to quantify LEP in serum, plasma, and tissue homogenates of bovine, 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

Serum; Plasma; Tissue homogenates

Detection Range

3.12-50 ng/mL

Sensitivity

<3.12 ng/mL

Precision (Intra-assay)

CV<15%

Precision (Inter-assay)

CV<15%

Cross-reactivity

No significant cross-reactivity or interference was observed.

Storage

Store at 2-8°C.