



## Porcine hormone sensitive lipase (LIPE) ELISA kit- Quantitative competitive

<b>Cat. No.:</b>	0126WXX-428
<b>Assay Type:</b>	Quantitative competitive ELISA
<b>Target Species:</b>	Porcine
<b>Assay Target:</b>	LIPE
<b>Size:</b>	48T; 96T

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

### Product Overview

#### Description

Porcine hormone sensitive lipase (LIPE) ELISA kit-Quantitative competitive is an ELISA-based *in vitro* research tool designed specifically for the quantitative detection of LIPE in porcine samples with a minimum detectable dose (sensitivity) of 0.1 ng/mL. The kit is highly sensitive and easy to use.

#### Assay Principle

The LIPE ELISA kit utilizes a competitive enzyme immunoassay technique. A monoclonal anti-LIPE antibody and an LIPE-HRP conjugate are incubated with the sample and buffer in a pre-coated plate for one hour. During this period, endogenous LIPE competes with the LIPE-HRP conjugate for a limited number of antibody binding sites. After incubation, the wells are washed five times. An HRP substrate is then added, forming a blue complex that turns yellow upon the addition of a stop solution. The absorbance is measured at 450 nm, where the color intensity is inversely proportional to the LIPE concentration. The LIPE concentration in each sample is determined by interpolating the O.D. values against a standard curve.

**Background**

LIPE, as a rate-limiting lipolytic enzyme, plays a pivotal role in lipid metabolism. It primarily hydrolyzes triglycerides stored in adipose tissue and cardiac muscle, converting them into free fatty acids. LIPE activity undergoes precise hormonal regulation: it is rapidly activated *via* cAMP-dependent phosphorylation under catecholamine influence, while insulin promotes its dephosphorylation and inactivation. Additionally, LIPE functions in steroid-producing tissues, converting cholesterol esters into cholesterol for steroid hormone synthesis. LIPE plays a pivotal role in the onset and progression of obesity, serving as the key rate-limiting enzyme in lipolysis. Its core function is to promote fat breakdown, releasing triglycerides stored within adipocytes for the body to utilize as energy. Obesity is frequently associated with abnormal regulation of LIPE activity within fat cells. Imbalances in its activity and regulation constitute a major molecular mechanism underlying fat accumulation and obesity.

**Synonyms**

HSL; LHS; Lipase, hormone sensitive; EC 3.1.1.79

**EC NO.**

3.1.1.79

**Formula Weight**

84,128 Da

**Applications**

Porcine hormone sensitive lipase (LIPE) ELISA kit-Quantitative competitive is used to quantify LIPE in serum, plasma, cell culture supernatants, body fluid, and tissue homogenate of porcine, providing data to support research in a wide range of areas, including metabolism, obesity, and others.

**Research Area**

Metabolism; Obesity

## Specification

**Sample Type**

Serum; Plasma; Cell culture supernatants; Body fluid; Tissue homogenate

**Detection Range**

0.5-10 ng/mL

**Sensitivity**

0.1 ng/mL

**Cross-reactivity**

No significant cross-reactivity or interference was observed.

**Recovery**

94-103%

**Storage**

Store at 2-8°C.