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Datasheet for ABIN411318

## Leptin ELISA Kit

1 Image

17 Publications

### Overview

Quantity:	96 tests
Target:	Leptin (LEP)
Binding Specificity:	AA 22-167
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

### Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Leptin
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: V22-C167
Specificity:	Expression system for standard: E.coli Immunogen sequence: V22-C167
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

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Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

## Target Details

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Target:	Leptin (LEP)
Alternative Name:	LEP ( <a href="#">LEP Products</a> )
Background:	<p>Protein Function: May function as part of a signaling pathway that acts to regulate the size of the body fat depot. .</p> <p>Background: Leptin(or obese, OB) is a circulating hormone that is expressed abundantly and specifically in the adipose tissue. Human ob protein is a 166-amino acid polypeptide with a putative signal sequence and is 84 and 83 % homologous to the mouse and rat ob proteins, respectively. Northern blot analysis reveals that OB RNA is present at a high level in adipose tissue but at much lower levels in placenta and heart. Indeed, Leptin is first described as an adipocyte-derived signalling factor, which, after interaction with its receptors, induces a complex response including control of bodyweight and energy expenditure. Leptin seems in addition to its role in metabolic control to have important roles in reproduction and neuroendocrine signalling. Leptin is a powerful inhibitor of bone formation in vivo. Comparative mapping of mouse and human DNA indicates that the ob gene is located within a region of mouse chromosome 6 that is homologous to a portion of human chromosome 7q. The standard product used in this kit is recombinant human Leptin.</p> <p>Synonyms: Leptin ,Obesity factor ,LEP ,hCG_33000 , tcag7.84 ,</p> <p>Full Gene Name: Leptin</p> <p>Cellular Localisation: Secreted.</p>
Gene ID:	3952
UniProt:	<a href="#">A4D0Y8</a>
Pathways:	<a href="#">JAK-STAT Signaling</a> , <a href="#">AMPK Signaling</a> , <a href="#">Hormone Transport</a> , <a href="#">Peptide Hormone Metabolism</a> , <a href="#">Hormone Activity</a> , <a href="#">Negative Regulation of Hormone Secretion</a> , <a href="#">Regulation of Carbohydrate Metabolic Process</a> , <a href="#">Feeding Behaviour</a> , <a href="#">Monocarboxylic Acid Catabolic Process</a>

## Application Details

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Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

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Plate: Pre-coated

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Protocol: human Leptin ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Leptin has been precoated onto 96-well plates. Standards(E.coli, V22-C167) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Leptin is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Leptin amount of sample captured in plate.

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Assay Procedure: Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL human Leptin standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Leptin standard solution and each sample be measured in duplicate.

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Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 1026, Standard deviation: 37.96, CV(%): 3.7
- Sample 2: n=16, Mean(pg/ml): 2535, Standard deviation: 81.12, CV(%): 3.2
- Sample 3: n=16, Mean(pg/ml): 3542, Standard deviation: 123.97, CV(%): 3.5,
- Sample 1: n=24, Mean(pg/ml): 990, Standard deviation: 57.42, CV(%): 5.8
- Sample 2: n=24, Mean(pg/ml): 2674, Standard deviation: 120.33, CV(%): 4.5
- Sample 3: n=24, Mean(pg/ml): 3305, Standard deviation: 125.59, CV(%): 3.8

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Restrictions: For Research Use only

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## Handling

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Handling Advice: Avoid multiple freeze-thaw cycles.

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Storage: -20 °C, 4 °C

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Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

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Expiry Date: 12 months

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## Publications

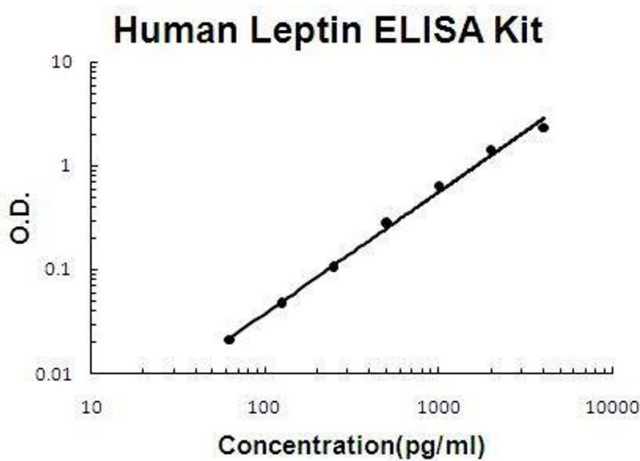
Product cited in: Martin, Koczera, Simons, Zechendorf, Hoeger, Marx, Schuerholz: "The Human Host Defense Ribonucleases 1, 3 and 7 Are Elevated in Patients with Sepsis after Major Surgery--A Pilot Study." in: **International journal of molecular sciences**, Vol. 17, Issue 3, pp. 294, (2016) ([PubMed](#)).

Kasiri, Beer, Nemeč, Gruber, Pietkiewicz, Haider, Simader, Traxler, Schweiger, Janik, Taghavi, Gabriel, Mildner, Ankersmit: "Dying blood mononuclear cell secretome exerts antimicrobial activity." in: **European journal of clinical investigation**, Vol. 46, Issue 10, pp. 853-63, (2016) ([PubMed](#)).

Teran, Ramirez-Jimenez, Soid-Raggi, Velazquez: "Interleukin 16 and CCL17/thymus and activation-regulated chemokine in patients with aspirin-exacerbated respiratory disease." in: **Annals of allergy, asthma & immunology : official publication of the American College of Allergy, Asthma, & Immunology**, Vol. 118, Issue 2, pp. 191-196, (2016) ([PubMed](#)).

There are more publications referencing this product on: [Product page](#)

## Images



### ELISA

**Image 1.** Human Leptin PicoKine ELISA Kit standard curve