

Product datasheet

Human Leptin ELISA Kit ab179884

SimpleStep ELISA[®]

[1 References](#) [3 Images](#)

Overview

Product name Human Leptin ELISA Kit

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
HeLa extract	5			2.4%

Inter-assay

Sample	n	Mean	SD	CV%
HeLa extract	3			2.7%

Sample type

Cell culture supernatant, Serum, Plasma, Heparin Plasma, EDTA Plasma, Citrate Plasma

Assay type

Sandwich (quantitative)

Sensitivity

2.3 pg/ml

Range

11.7 pg/ml - 750 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Serum	95	90% - 99%
Cell culture media	116	114% - 119%
Heparin Plasma	116	108% - 122%
EDTA Plasma	106	103% - 108%
Citrate Plasma	109	104% - 111%

Assay time

1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Human

Product overview

Abcam's Leptin *in vitro* SimpleStep ELISA® (Enzyme-Linked Immunosorbent Assay) kit is designed for the accurate quantitative measurement of Leptin protein in Human serum, plasma and cell culture supernatants.

The SimpleStep ELISA® employs an affinity tag labeled capture antibody and a reporter conjugated detector antibody which immunocapture the sample analyte in solution. This entire complex (capture antibody/analyte/detector antibody) is in turn immobilized via immunoaffinity of an anti-tag antibody coating the well. To perform the assay, samples or standards are added to the wells, followed by the antibody mix. After incubation, the wells are washed to remove unbound material. TMB substrate is added and during incubation is catalyzed by HRP, generating blue coloration. This reaction is then stopped by addition of Stop Solution completing any color change from blue to yellow. Signal is generated proportionally to the amount of bound analyte and the intensity is measured at 450 nm. Optionally, instead of the endpoint reading, development of TMB can be recorded kinetically at 600 nm.

Notes Leptin is a secreted protein factor produced by adipocytes. It regulates energy balance and body fat deposits. Leptin deficiency in humans and mice can cause in obesity. Acute low levels of leptin triggers increased appetite and chronic leptin deficiency can block the onset of puberty.

Tested applications **Suitable for:** Sandwich ELISA

Platform Microplate

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Leptin Capture Antibody	1 x 600µl
10X Leptin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Leptin Human Lyophilized Recombinant	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

Function May function as part of a signaling pathway that acts to regulate the size of the body fat depot. An increase in the level of LEP may act directly or indirectly on the CNS to inhibit food intake

and/or regulate energy expenditure as part of a homeostatic mechanism to maintain constancy of the adipose mass.

Involvement in disease

Defects in LEP may be a cause of obesity (OBESITY) [MIM:601665]. It is a condition characterized by an increase of body weight beyond the limitation of skeletal and physical requirements, as the result of excessive accumulation of body fat.

Sequence similarities

Belongs to the leptin family.

Cellular localization

Secreted.

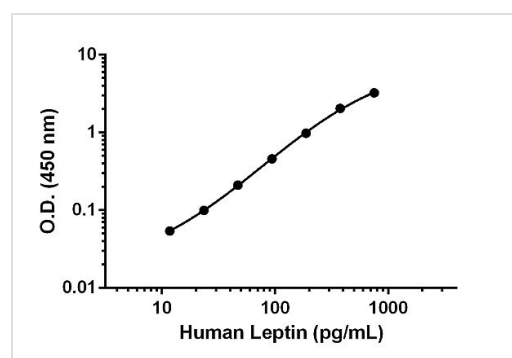
Applications

Our [Abpromise guarantee](#) covers the use of **ab179884** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

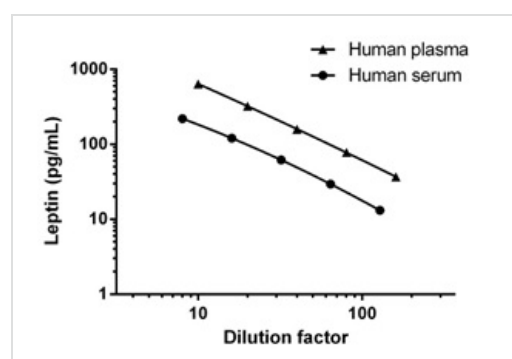
Application	Abreviews	Notes
Sandwich ELISA		Use at an assay dependent concentration.

Images



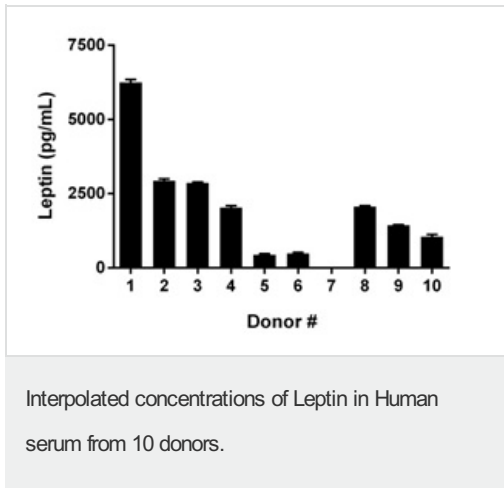
Background-subtracted data values (mean +/- SD) are graphed.

Example of Leptin standard curve.



The concentrations of Leptin were interpolated from the Leptin standard curve and corrected for sample dilution. The mean Leptin concentration was determined to be 6,260 pg/mL in plasma (citrate) and 1,845 pg/mL in serum.

Interpolated concentrations of Leptin in Human serum and plasma titrations.



Serum from 10 apparently healthy male donors was measured in triplicate for Leptin. The mean Leptin concentration was determined to be 2174 pg/mL with a range of 443 – 6250 pg/mL (Leptin was not detected in serum from Donor 7).

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