

Product datasheet

Mouse Leptin ELISA Kit, Fluorescent ab229421

CatchPoint[®] SimpleStep[®] ELISA[™]

[4 Images](#)

Overview

Product name Mouse Leptin ELISA Kit, Fluorescent

Detection method Fluorescent

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Mouse serum	5			5.9%

Inter-assay

Sample	n	Mean	SD	CV%
Mouse serum	3			11.5%

Sample type

Cell culture supernatant, Urine, Serum, Hep Plasma, Cit plasma

Assay type

Sandwich (quantitative)

Sensitivity

21.4 pg/ml

Range

23.4 pg/ml - 48000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Urine	80	77% - 82%
Serum	111	110% - 114%
Cell culture media	104	103% - 105%
Hep Plasma	106	94% - 116%
Cit plasma	104	100% - 111%

Assay time

1h 30m

Assay duration

One step assay

Species reactivity**Reacts with:** Mouse**Does not react with:** Goat, Cow, Pig**Product overview**

Leptin *in vitro* CatchPoint SimpleStep ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the quantitative measurement of Leptin protein in mouse serum, plasma (citrate), urine and cell culture supernatants.

This CatchPoint SimpleStep ELISA kit has been **optimized for Molecular Devices Microplate Readers**. Click [here](#) for a list of recommended Microplate Readers.

If using a Molecular Devices' plate reader supported by SoftMax® Pro software, a preconfigured protocol for these CatchPoint SimpleStep ELISA Kits is available with all the protocol and analysis settings at www.softmaxpro.org.

The CatchPoint 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. CatchPoint HRP Development Solution containing the Stoplight Red Substrate is added. During incubation, the substrate is catalyzed by HRP generating a fluorescent product. Signal is generated proportionally to the amount of bound analyte and the intensity is measured in a fluorescence plate reader at 530/570/590 nm Excitation/Cutoff/Emission.

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 obesity. Circulating levels of Leptin are regulated by food intake, insulin levels and pregnancy status. Mouse leptin has 96% and 85% protein sequence identity to rat and human leptin, respectively.

Platform

Pre-coated microplate (12 x 8 well strips)

Properties**Storage instructions**

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

Components	1 x 96 tests
100X Stoplight Red Substrate	1 x 120µl
10X Mouse Leptin Capture Antibody	1 x 600µl
10X Mouse Leptin Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
500X Hydrogen Peroxide (H2O2, 3%)	1 x 50µl
Antibody Diluent CPI - HAMA Blocker (ab193969)	1 x 6ml
Mouse Leptin Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit

Components	1 x 96 tests
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated Black 96-Well Microplate	1 unit
Stoplight Red Substrate Buffer	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.

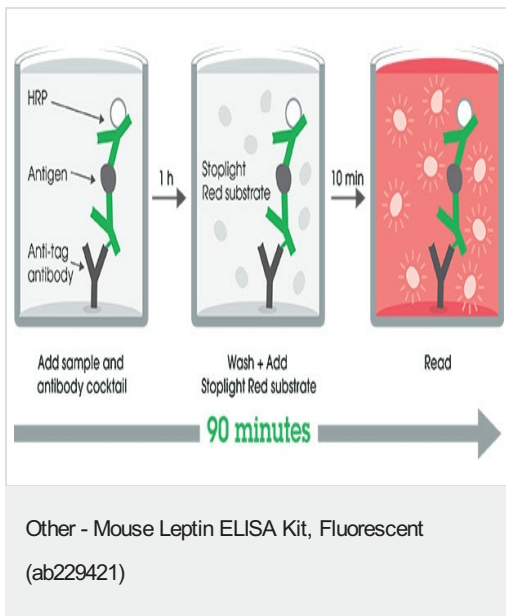
Sequence similarities

Belongs to the leptin family.

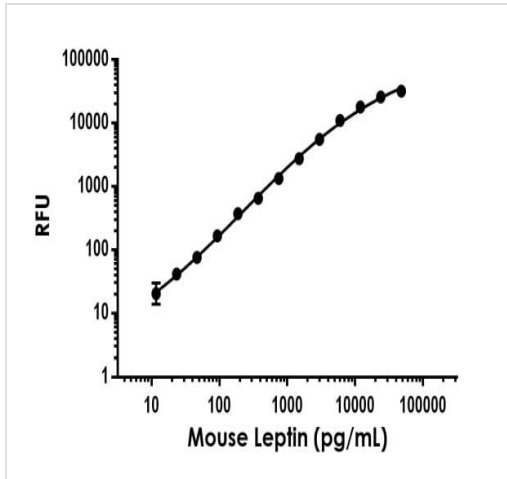
Cellular localization

Secreted.

Images

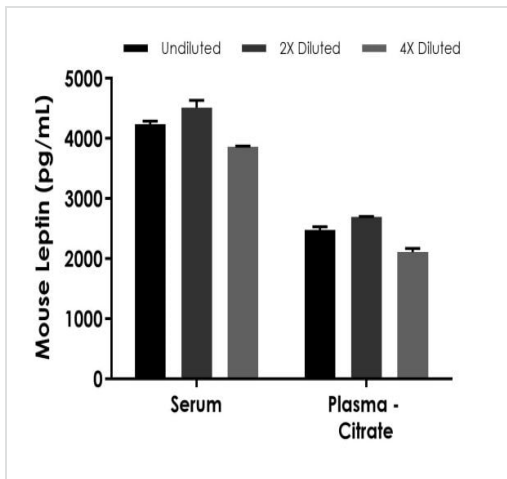


SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



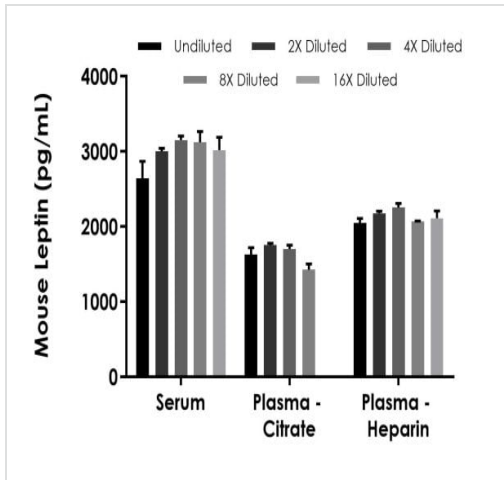
Background-subtracted data values (mean +/- SD) are graphed.

Example of mouse Leptin standard curve in Sample Diluent NS.



The concentrations of Leptin were measured in duplicate and interpolated from the Leptin standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Leptin concentration was determined to be 4514.3 pg/mL in mouse serum and 2698.1 pg/mL in mouse plasma (Citrate).

Interpolated concentrations of Leptin in mouse serum and plasma (citrate).



Interpolated concentrations of Leptin in rat serum, plasma (citrate), and plasma (heparin).

The concentrations of Leptin were measured in duplicate and interpolated from the Leptin standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2). The mean Leptin concentration was determined to be 2983 pg/mL in rat serum, 1626 pg/mL in rat plasma (citrate) and 2134 pg/mL in rat plasma (heparin).

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