



Product datasheet

Human Leptin ELISA Kit ab179884

SimpleStep ELISA

8 References 7 Images

Overview

Product name Human Leptin ELISA Kit

Detection method Colorimetric

Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Serum	8			5.1%

	Inter-assay				
	Sample	n	Mean	SD	CV%
	Serum	3			3.5%

Sample type Cell culture supernatant, Serum, Plasma, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 4.65 pg/ml

Range 15.63 pg/ml - 1000 pg/ml

Recovery	Sample specific recovery		
	Sample type	Average %	Range
	Serum	91	90% - 93%
	Cell culture media	102	101% - 104%
	Hep Plasma	98	88% - 105%
	EDTA Plasma	82	80% - 87%
	Cit plasma	113	107% - 123%

Assay time 1h 30m

Assay duration One step assay

Species reactivity**Reacts with:** Human**Product overview**

As of January 16, 2020, Human Leptin ELISA kit (ab179884) has been re-developed. We have identified new recombinant monoclonal antibodies to provide improved performance and consistency.

Human Leptin ELISA kit (ab179884) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Leptin protein in human serum, plasma and cell culture supernatants. It uses our proprietary SimpleStep ELISA® technology. Quantitate human Leptin with 4.65 pg/mL sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate ([ab203359](#)) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

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. Acute low levels of leptin triggers increased appetite and chronic leptin deficiency can block the onset of puberty.

Platform

Microplate

Properties**Storage instructions**

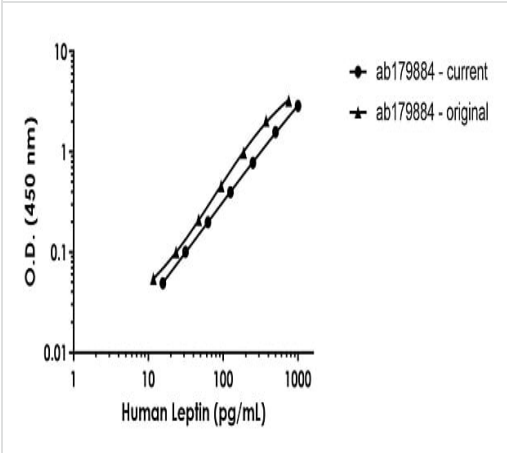
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests	10 x 96 tests
10X Human Leptin Capture Antibody	1 x 600µl	1 x 600µl
10X Human Leptin Detector Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
Antibody Diluent 4BI	1 x 6ml	1 x 6ml
Human Leptin Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 50ml	1 x 50ml

Components	1 x 96 tests	10 x 96 tests
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	1 unit
Stop Solution	1 x 12ml	1 x 12ml
TMB Development Solution	1 x 12ml	1 x 12ml

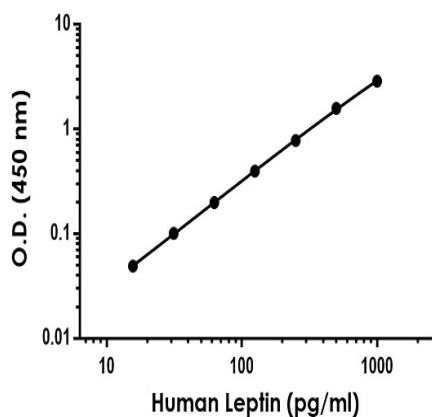
Function	May function as part of a signaling pathway that acts to regulate the size of the body fat depot. An increase in the level of LEP may act directly or indirectly on the CNS to inhibit food intake and/or regulate energy expenditure as part of a homeostatic mechanism to maintain constancy of the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



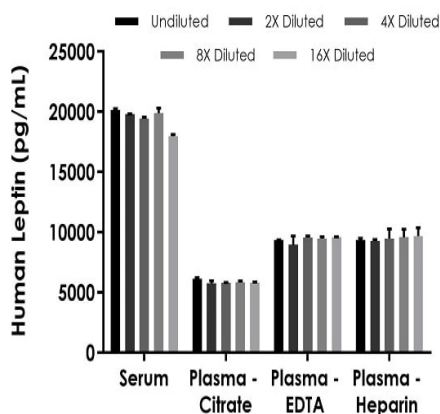
Human Leptin redevelopment standard curve comparison

Standard Curve comparison between original human Leptin SimpleStep ELISA kit and redeveloped Simplestep ELISA kit. SimpleStep ELISA kit shows increased performance.



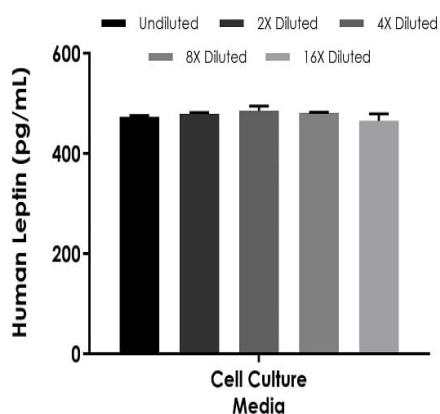
Example of human Leptin standard curve in Sample Diluent NS.

The Leptin standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean \pm SD) are graphed.



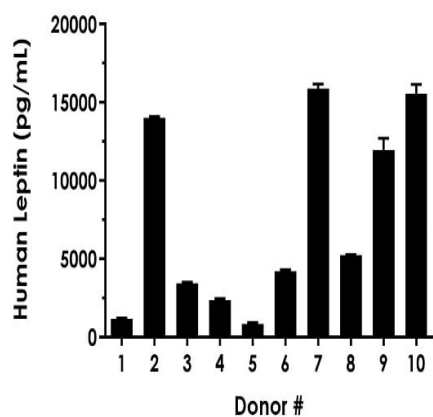
Interpolated concentrations of native Leptin in human serum and plasma.

The concentrations of Leptin were measured in duplicates, interpolated from the Leptin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 2.5%, plasma (citrate) 10%, plasma (edta) 10%, and plasma (heparin) 10%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean Leptin concentration was determined to be 19,448 pg/mL in serum, 5,865 pg/mL in plasma (citrate), 9,377 pg/mL in plasma (edta), and 9,463 pg/mL in plasma (heparin).



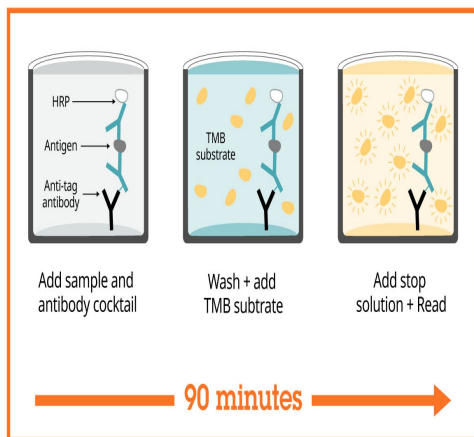
Interpolated concentrations of spike Leptin in cell culture media samples.

The concentrations of Leptin were measured in duplicates, interpolated from the Leptin standard curves and corrected for sample dilution. Undiluted samples are as follows: cell culture media 50%. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$).



Serum from ten individual healthy human male donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean Leptin concentration was determined to be 7,463 pg/mL with a range of 836 – 15,878 pg/mL.



Sandwich ELISA - Human Leptin ELISA Kit
(ab179884)

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.

Get more done with SimpleStep ELISA



Easy to use
Single-wash 90-minute protocol



Flexible
Matched antibody pairs available



Precision antibodies
High sensitivity, specificity and reproducibility



Scalable
Now in 10-pack and 384-well formats

Sandwich ELISA - Human Leptin ELISA Kit
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To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

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