abcam

Product datasheet

Human IGF1 ELISA Kit ab211651

SimpleStep ELISA®

9 References   12 图像

概述

产品名称	人IGF1 ELISA试剂盒
检测方法	Colorimetric

精确度

批次内

样品	n	Mean	SD	CV%
Serum	8			4.9%

批次间

样品	n	Mean	SD	CV%
Serum	3			9.5%

样品类型	Serum, Cell culture media, Hep Plasma, EDTA Plasma, Cit plasma
检测类型	Sandwich (quantitative)
灵敏度	11.97 pg/ml
范围	93.75 pg/ml - 6000 pg/ml

回收率

特定样本回收率

样品类型	平均%	范围
Serum	86	83% - 90%
Cell culture media	100	96% - 104%
Hep Plasma	100	91% - 111%
EDTA Plasma	113	106% - 118%
Cit plasma	100	97% - 104%

检测时间	1h 30m
实验步骤	One step assay

种属反应性	**与反应**: Human
产品概述	**Human IGF1 ELISA kit has been re-developed. We have identified new recombinant monoclonal antibodies to provide improved performance and consistency.**

Human IGF1 ELISA Kit (ab211651) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of IGF1 protein in serum, cell culture media, cit plasma, edta plasma, and hep plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate Human IGF1 with 11.97 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.

ASSAY SPECIFICITY This kit recognizes both native and recombinant human IGF1 protein in serum, plasma, and cell culture supernatant samples only. Cell and tissue extract samples have not been tested with this kit.

This kit is incompatible with cell culture supernatant samples than contain bovine serum.

CROSS REACTIVITY Recombinant human IGF2 and IGFBP3 were prepared at 16000 and 8000 pg/mL and assayed for cross reactivity. No cross-reactivity was observed.

INTERFERENCE Recombinant IGF1 and IGFBP3 were prepared at 12000 pg/mL and 12000 p/mL and tested for interference. No interference with was observed.

SPECIES REACTIVITY This kit recognizes human IGF1 protein. Other species reactivity was determined by measuring 1.25% plasma - citrate samples of various species, interpolating the protein concentrations from the human standard curve, and expressing the interpolated concentrations as a percentage of the protein concentration in human plasma - citrate assayed at the same dilution. Reactive species: Bovine, Primate. Reactivity < 3% was determined for the following species: Mouse, Rat

说明	Insulin-like growth factor I (IGF1) is a 70 amino acid hormone that this proteolytically processed from a larger precursor protein. IGF1 is structurally similar to insulin and has growth promoting effects.

Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH

Authorisation, and any other relevant authorisations, for their intended uses.

平台 Pre-coated microplate (12 x 8 well strips)

性能

存放说明 Store at +4°C. Please refer to protocols.

组件	1 x 96 tests	1 x 384 tests
10X Human IGF1 Capture Antibody	1 x 600µl	1 x 600µl
10X Human IGF1 Detector Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
384 well CaptSure™ microplates	0 x 0 unit	1 unit
50X Cell Extraction Enhancer Solution (ab193971)	1 x 1ml	6 x 1ml
Antibody Diluent 4BR	1 x 6ml	1 x 6ml
Denaturant	1 x 500µl	1 x 500µl
Human IGF1 Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 50ml	1 x 250ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit	0 x 0 unit
Stop Solution	1 x 12ml	2 x 12ml
TMB Development Solution	1 x 12ml	2 x 12ml

功能 The insulin-like growth factors, isolated from plasma, are structurally and functionally related to insulin but have a much higher growth-promoting activity. May be a physiological regulator of [1-14C]-2-deoxy-D-glucose (2DG) transport and glycogen synthesis in osteoblasts. Stimulates glucose transport in rat bone-derived osteoblastic (PyMS) cells and is effective at much lower concentrations than insulin, not only regarding glycogen and DNA synthesis but also with regard to enhancing glucose uptake.

疾病相关 Defects in IGF1 are the cause of insulin-like growth factor I deficiency (IGF1 deficiency) [MIM:608747]. IGF1 deficiency is an autosomal recessive disorder characterized by growth retardation, sensorineural deafness and mental retardation.
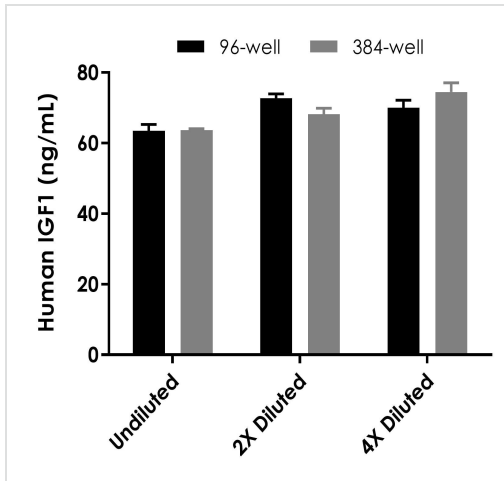
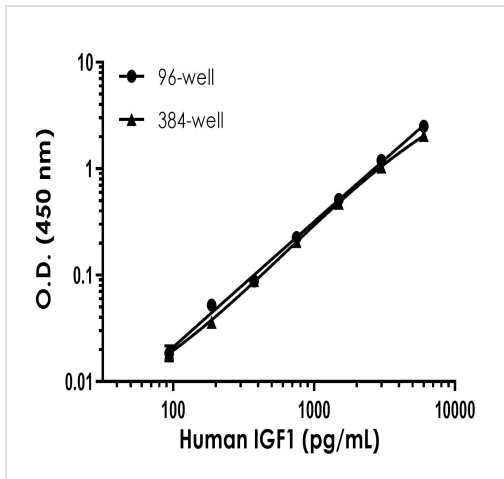**序列相似性** Belongs to the insulin family.
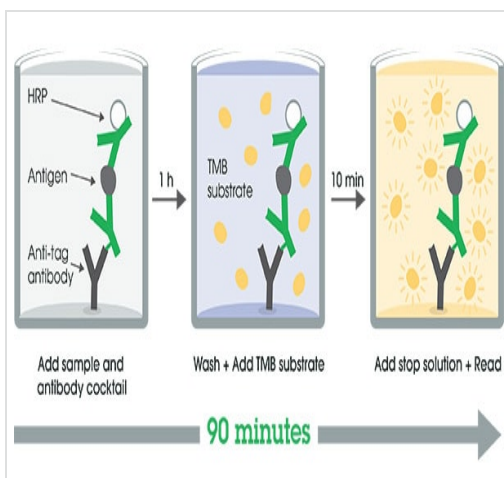
细胞定位 Secreted.

图片

Sandwich ELISA - Human IGF1 ELISA Kit
(ab211651)

Interpolated concentration of native IGF1 was measured in duplicate at different sample concentrations in 96-well vs. 384-well plates. Undiluted samples are 2.5% serum. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). Sample dilutions are made in Sample Diluent NS + 1X Enhancer.
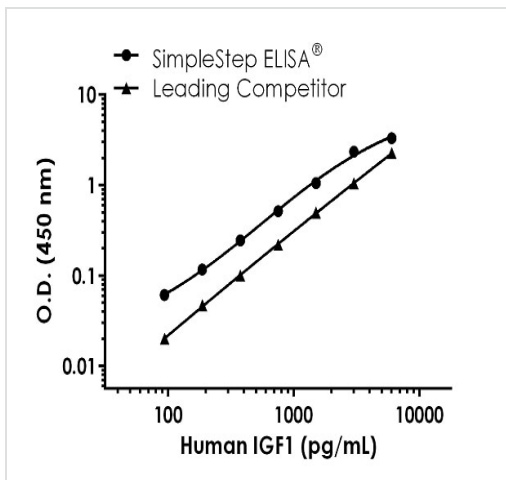

Sandwich ELISA - Human IGF1 ELISA Kit
(ab211651)

Example of human IGF1 standard curve in 96-well vs. 384-well plate. Background-subtracted data values (mean +/- SD) are graphed.
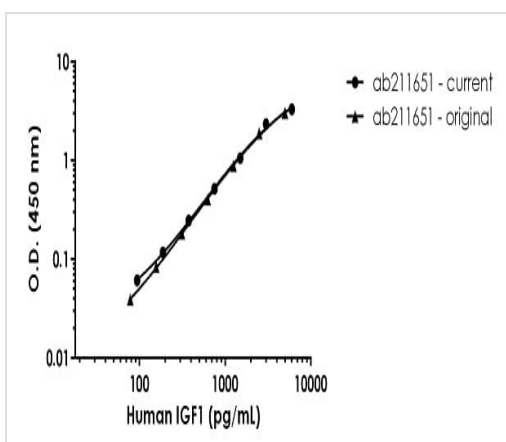

Other - Human IGF1 ELISA Kit (ab211651)

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.
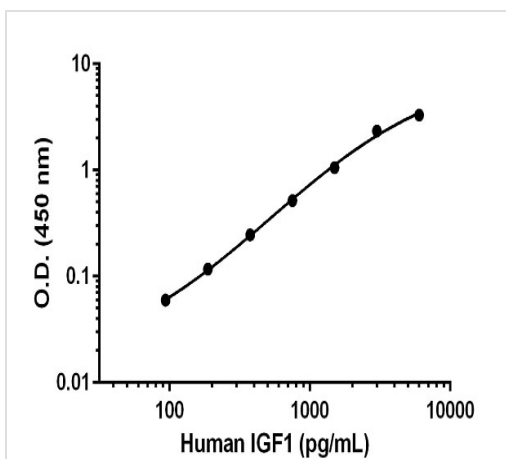
Human IGF1 competitor curve comparison

Standard Curve comparison between human IGF1 SimpleStep ELISA kit and traditional ELISA kit from leading competitor. SimpleStep ELISA kit shows increased sensitivity.

Human IGF1 standard curve comparison

Standard Curve comparison between the original human IGF1 SimpleStep ELISA kit and current human IGF1 SimpleStep ELISA kit.
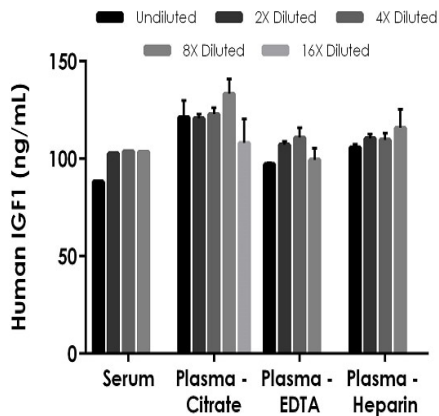

Example of human IGF1 standard curve in Sample Diluent NS + 1X Enhancer.

The IGF1 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

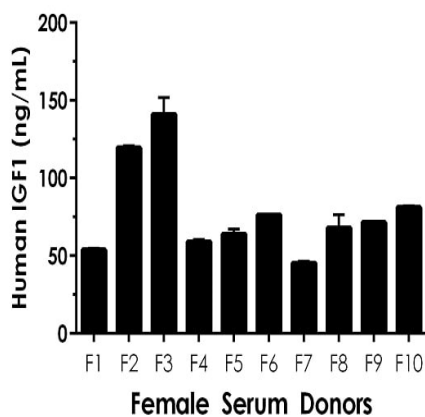| Standard Curve Measurements			
Concentration (pg/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.134	0.143	0.139
93.75	0.189	0.210	0.199
187.5	0.247	0.265	0.256
375	0.366	0.403	0.385
750	0.639	0.671	0.655
1500	1.151	1.244	1.198
3000	2.513	2.446	2.480
6000	3.424	3.445	3.435

Example of human IGF1 standard curve in Sample Diluent NS + 1X Enhancer.

Example of human IGF1 standard curve in Sample Diluent NS + 1X Enhancer. The IGF1 standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.
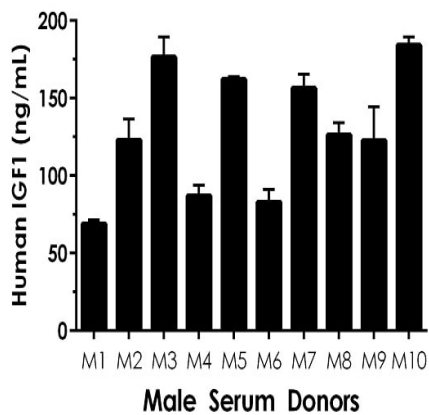

Interpolated concentrations of native IGF1 in human serum and plasma samples.

The concentrations of IGF1 were measured in duplicates, interpolated from the IGF1 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 2.5%, plasma (citrate) 1.25%, plasma (EDTA) 1.25%, and plasma (heparin) 1.25%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IGF1 concentration was determined to be 99.58 ng/mL in serum, 121.23 pg/mL in plasma (citrate), 103.65 ng/mL in plasma (EDTA), and 110.43 ng/mL in plasma (heparin).

1% Serum from ten individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IGF1 concentration was determined to be 78.06 pg/mL with a range of 45.41 – 141.07 pg/mL.

Interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean IGF1 concentration was determined to be 129.12 ng/mL with a range of 69.09-184.22 ng/mL.

1% Serum from ten individual healthy human male donors was measured in duplicate.

Dilution Factor	Interpolated value		2.5% Human Serum	1.25% Human Plasma (Citrate)	1.25% Human Plasma (EDTA)	1.25% Human Plasma (Heparin)
Undiluted	pg/mL		2205.91	1515.90	1214.22	1322.57
	% Expected value		100	100	100	100
2	pg/mL		1282.91	754.61	669.68	690.04
	% Expected value		116	100	110	104
4	pg/mL		649.13	383.68	346.44	342.70
	% Expected value		118	101	114	104
8	pg/mL		323.72	208.28	155.37	181.01
	% Expected value		117	110	102	109
16	pg/mL		NL	84.43	NL	NL
	% Expected value		NL	89	NL	NL

NL – Non-Linear

Linearity of dilution.

Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.

Native IGF1 was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in Sample Diluent NS + 1X Enhancer.

Dilution Factor	Interpolated value	50% OF RPMI Cell Culture Media
Undiluted	pg/mL	6046.03
	% Expected value	100
2	pg/mL	2693.98
	% Expected value	88
4	pg/mL	1421.73
	% Expected value	93
8	pg/mL	826.63
	% Expected value	109
16	pg/mL	410.36
	% Expected value	108

Linearity of dilution.

Recombinant IGF1 was spiked into the following biological samples and diluted in a 2-fold dilution series in Sample Diluent NS + 1X Enhancer.

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