abcam

Product datasheet

Human GLP1 (7-36) ELISA Kit ab184857

リコンビナント SimpleStep ELISA

★★★★★ **3 Abreviews**   **8 References**   画像数 8

製品の概要

製品名	Human GLP1 (7-36) ELISA Kit
検出方法	Colorimetric
再現性	

Intra-Assay（同時再現性）

サンプル	N	平均値	SD	CV%
Human serum	8			7%

Inter-Assay（日差再現性）

サンプル	N	平均値	SD	CV%
Human serum	3			9%

サンプルの種類	Cell culture supernatant, Serum, Hep Plasma, Cit plasma
アッセイタイプ	Sandwich (quantitative)
検出感度	25 pg/ml
検出範囲	59.6 pg/ml - 1000 pg/ml
添加回収試験	

特定サンプルでの回収試験

サンプルの種類	平均 %	測定範囲
Serum	109	105% - 112%
Cell culture media	99	93% - 102%
Hep Plasma	110	104% - 112%
Cit plasma	115	107% - 123%

全工程の試験時間	1h 30m
ステップ	One step assay
種交差性	交差種: Human

交差が予測される動物種: Sheep, Horse ⚠

製品の概要

Human GLP1 (7-36) ELISA kit (ab184857) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of GLP-1(7-36) active peptide protein in human serum, plasma and culture supernatants. It uses our proprietary SimpleStep ELISA® technology. Quantitate human GLP1 with 25 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 SimpeStep ELISA® kits.

ASSAY SPECIFICITY

GLP-1(9-36) recombinant protein was diluted at 10ng/mL and assayed for cross reactivity. Signal was found at 7% from GLP-1 (7-36) protein assayed at the same concentration.

SPECIES REACTIVITY

This kit recognizes both native and recombinant human GLP-1 protein in the serum and plasma samples.

Due to sequence similarity, this kit is predicted to cross react with multiples species such as mouse, rat, bovine, sheep, rabbit, pig and horse.

特記事項

GLP-1 (Glucagon like peptide 1) is part of the group of incretin hormones that are secreted by the gastrointestinal tract in response to food intake to assist glucose stimulated insulin secretion and glucagon suppression. GLP-1 is a 30 aminoacid peptide cleaved from proglucagon and released by the L-cells of the distal ileum. The intracellular precursor of GLP-1 (1-37) is cleaved to form the active peptides GLP-1 (7-37) and GLP-1 (7-36)NH2. The active peptides bind to the GLP-1 receptor (GLP-1r) expressed in the pancreatic beta cell and are quickly metabolized by the enzyme dipeptidyl peptidase IV (DPP-IV) to form the peptide GLP-1 (9-36), which has no insulin stimulating activity. Binding of active GLP-1 to the receptor, increases cAMP levels and potentiates insulin secretion via Protein Kinase A (PKA) and the cAMP-regulated nucleotide exchange factor (Epac2).
GLP-1 and its receptor are also suggested to play a role in the central nervous systems as mediators of satiety. Intracerebroventricular GLP-1 has been shown to induce c-FOS activity in the hypothalamus and the central nucleus of the amygdala, both of which are important in the regulation of appetite.

試験プラットフォーム	Microplate

製品の特性

保存方法	Store at +4°C. Please refer to protocols.

| 内容	1 x 96 tests	1 x 96 tests
10X Human GLP1 (7-36) Capture Antibody	1 x 600µl	1 x 600µl
10X Human GLP1 (7-36) Detector Antibody	1 x 600µl	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml	1 x 20ml
Antibody Diluent CPI2	1 x 6ml	1 x 6ml
Human GLP1 Lyophilized Recombinant Protein	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	1 x 50ml	1 x 50ml
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

関連性	Glucagon plays a key role in glucose metabolism and homeostasis. Regulates blood glucose by increasing gluconeogenesis and decreasing glycolysis. A counterregulatory hormone of insulin, raises plasma glucose levels in response to insulin-induced hypoglycemia. Plays an important role in initiating and maintaining hyperglycemic conditions in diabetes.
細胞内局在	Secreted.

画像
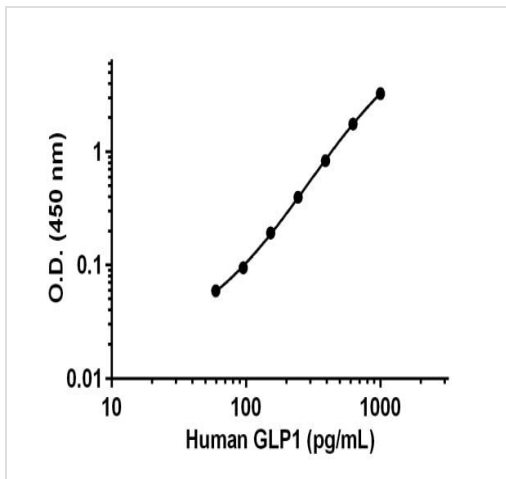
Example of GLP-1 standard curve.

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

Standard Curve Measurements			
Conc.	O.D. 450 nm		Mean
(pg/mL)	1	2	O.D.
0	0.076	0.071	0.073
59.6	0.127	0.128	0.128
95.4	0.161	0.164	0.163
152.6	0.265	0.255	0.260
244.1	0.452	0.481	0.466
390.6	0.912	0.891	0.902
625	1.823	1.829	1.826
1000	3.370	3.305	3.338

Standard curve

Example of GLP-1 standard curve. The GLP-1 standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.
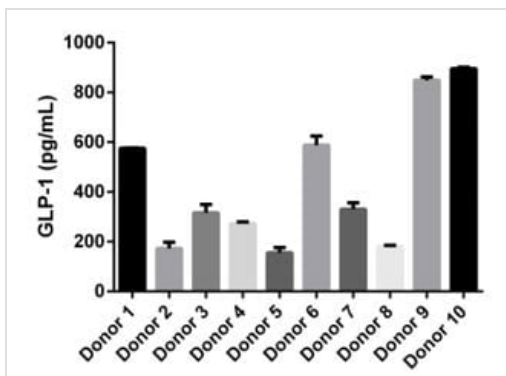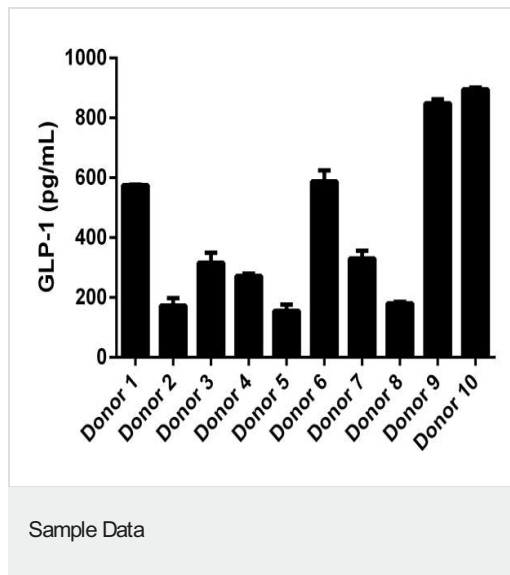

Ten individual healthy donors were evaluated for the presence of GLP-1 in serum using this assay.

Serum of each donor was diluted 1:10 using sample diluent NS. The mean levels of GLP-1, after adjusting for dilution factor, were found at 433.5 pg/mL with a standard deviation of 277 pg/mL.

Sample Data

Ten individual healthy donors were evaluated for the presence of GLP-1 in serum using this assay. Serum of each donor was diluted 1/10 using sample diluent NS. The mean levels of GLP-1, after adjusting for dilution factor, were found at 433.5 pg/mL with a standard deviation of 277 pg/mL.

Dilution Factor	Interpolated value	10% Human Serum	10% Human Plasma (Citrate)	1% Human Plasma (Heparin)	10% Culture media
1	pg/mL	257.70	260.90	265.20	238.00
	% Expected value	100	100	100	100
2	pg/mL	136.30	145.90	126.90	125.10
	% Expected value	106	112	96	105
4	pg/mL	68.60	73.40	67.60	60.50
	% Expected value	106	113	102	102
8	pg/mL	28.20	27.50	34.90	23.80
	% Expected value	87	84	105	80

Linearity of dilution.

Recombinant GLP-1 (7-36) was spiked into the following biological samples and diluted in a 2-fold dilution series in Sample Diluent NS.
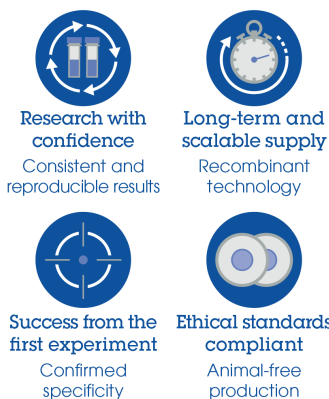
Linearity of dilution is determined based on interpolated values from the standard curve. Linearity of dilution defines a sample concentration interval in which interpolated target concentrations are directly proportional to sample dilution.
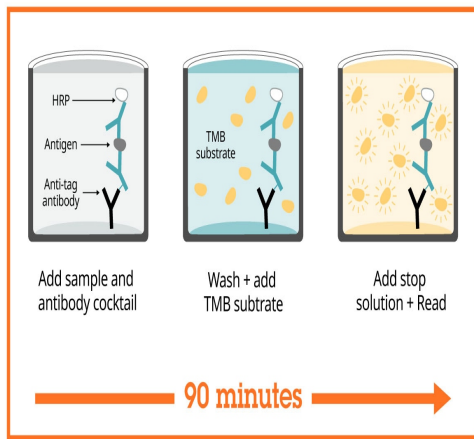
SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Sandwich ELISA - Human GLP1 (7-36) ELISA Kit (ab184857)

To learn more about the advantages of recombinant antibodies see **here**.

Sandwich ELISA - Human GLP1 (7-36) ELISA Kit (ab184857)

To learn more about the advantages of SimpleStep ELISA® kits see **here**.

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