

Human Albumin ELISA Kit ab179887

リコンビナント SimpleStep ELISA

★★★★☆ 1 Abreviews 15 References 画像数 12

製品の概要

製品名	Human Albumin 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%
Serum	8			5.2%

Inter-Assay (日差再現性)

サンプル	N	平均値	SD	CV%
Serum	3			7.6%

サンプルの種類	Cell culture supernatant, Serum, Hep Plasma, EDTA Plasma, Cit plasma
アッセイタイプ	Sandwich (quantitative)
検出感度	0.1 ng/ml
検出範囲	0.7 ng/ml - 45 ng/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
Cell culture supernatant	104	104% - 105%
Serum	100	92% - 110%
Hep Plasma	98	89% - 105%
EDTA Plasma	104	97% - 109%
Cit plasma	101	100% - 103%

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, Cynomolgus monkey

製品の概要

As of December 12, 2019 Human Albumin ELISA kit has been re-developed with new recombinant monoclonal antibodies to provide improved performance and consistency.

Human Albumin ELISA kit (ab179887) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Albumin protein in human serum and plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate human Albumin with 100 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 native human Albumin protein in serum, plasma, and cell culture supernatant samples only. Urine, saliva, cell and tissue extract samples have not been tested with this kit.

SPECIES REACTIVITY

This kit recognizes human Albumin and Cynomolgus monkey albumin protein. If you require a kit that is human-specific, please see [ab227933](#).

Other species reactivity was determined by measuring 1:4,000,000 serum 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 serum assayed at the same dilution.

Reactivity < 3% was determined for the following species: Mouse, rat, Cow.

特記事項

Albumin (ALB), the main protein of plasma, has a good binding capacity for water, Ca²⁺, Na⁺, K⁺, fatty acids, hormones, bilirubin and drugs. Its main function is the regulation of the colloidal osmotic pressure of blood. It also serves as a major zinc transporter in plasma, typically binds about 80% of all plasma zinc.

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 384 tests
10X Human Albumin Capture Antibody	1 x 600µl	1 x 600µl
10X Human Albumin 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
Antibody Diluent 4BI	1 x 6ml	1 x 6ml
Native Human Serum Albumin protein (Lyophilized) (ab205808)	2 vials	2 vials
Plate Seals	1 unit	1 unit
Sample Diluent NS (ab193972)	2 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

機能

Serum albumin, the main protein of plasma, has a good binding capacity for water, Ca(2+), Na(+), K(+), fatty acids, hormones, bilirubin and drugs. Its main function is the regulation of the colloidal osmotic pressure of blood. Major zinc transporter in plasma, typically binds about 80% of all plasma zinc.

組織特異性

Plasma.

関連疾患

Defects in ALB are a cause of familial dysalbuminemic hyperthyroxinemia (FDH) [MIM:103600]. FDH is a form of euthyroid hyperthyroxinemia that is due to increased affinity of ALB for T(4). It is the most common cause of inherited euthyroid hyperthyroxinemia in Caucasian population.

配列類似性

Belongs to the ALB/AFP/VDB family.
Contains 3 albumin domains.

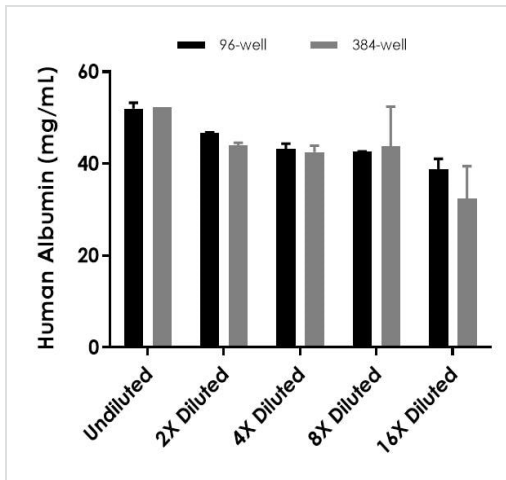
翻訳後修飾

Kenitra variant is partially O-glycosylated at Thr-620. It has two new disulfide bonds Cys-600 to Cys-602 and Cys-601 to Cys-606.
Glycated in diabetic patients.
Phosphorylation sites are present in the extracellular medium.
Acetylated on Lys-223 by acetylsalicylic acid.

細胞内局在

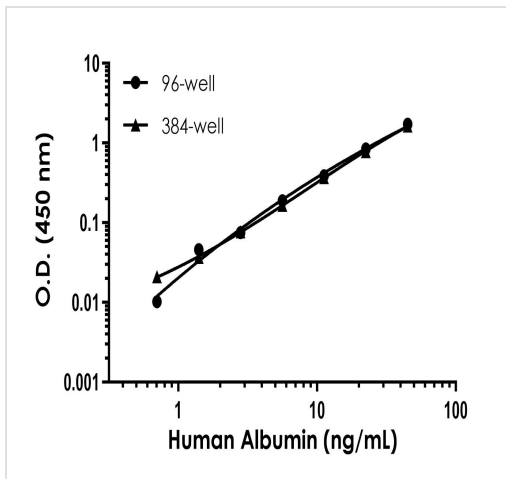
Secreted.

画像



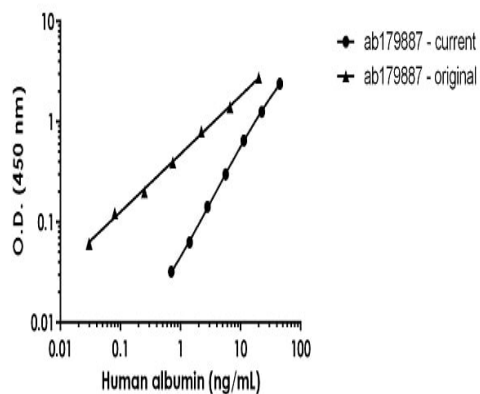
Interpolated concentrations of human Albumin in serum in 96-well vs. 384-well plates.

Interpolated concentration of native Albumin was measured in duplicate at different sample concentrations in 96-well vs. 384-well plates. Undiluted samples are human serum 1:1,000,000. The interpolated dilution factor corrected values (to neat) are plotted (mean \pm SD, n=2). Sample dilutions are made in Sample Diluent NS.



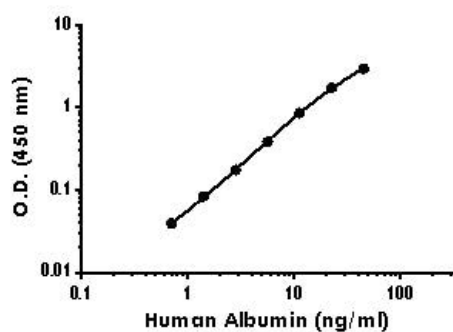
Example of human Albumin standard curve in Sample Diluent NS in 96-well vs. 384-well plate.

Example of human Albumin standard curve in 96-well vs. 384-well plate. Background-subtracted data values (mean \pm SD) are graphed.



Human Albumin standard curve comparison

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



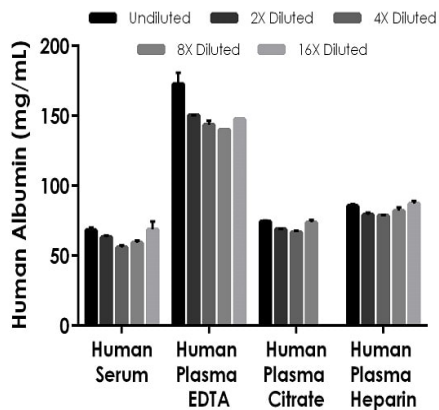
Background-subtracted data values (mean +/- SD) are graphed.

Standard curve

Standard Curve Measurements			
Concentration (ng/mL)	O.D 450 nm		Mean O.D
	1	2	
0	0.102	0.102	0.102
0.70	0.135	0.133	0.134
1.41	0.169	0.161	0.165
2.81	0.255	0.234	0.245
5.63	0.414	0.389	0.402
11.25	0.779	0.728	0.753
22.5	1.348	1.369	1.359
45	2.537	2.439	2.488

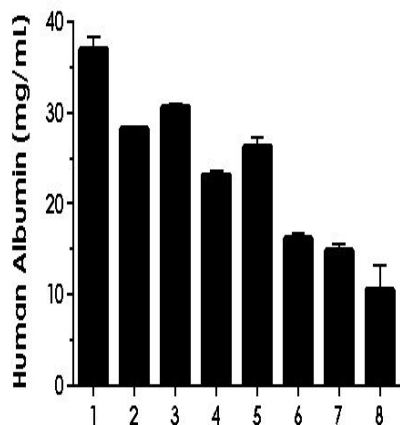
Example of human Albumin standard curve in Sample Diluent NS. The Albumin standard curve was prepared as described. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

Standard curve



Interpolated concentrations of native Albumin in human serum, plasma and cell culture supernatant samples.

The concentrations of Albumin were measured in duplicates, interpolated from the Albumin standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 1:4,000,000, plasma (EDTA) 1:4,000,000, plasma (citrate) 1:8,000,000, and plasma (heparin) 1:8,000,000. The interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean Albumin concentration was determined to be 31.5 mg/mL in serum, 75.4 mg/mL in plasma (EDTA), 35.5 mg/mL in plasma (citrate) and 41.3 mg/mL in plasma (heparin).



Serum from eight individual healthy human female donors was measured in duplicate.

Interpolated dilution factor corrected values are plotted (mean \pm SD, $n=2$). The mean Albumin concentration was determined to be 23.4 mg/mL with a range of 10.5 – 37.1 mg/mL.

Dilution Factor	Interpolated value	10% RPMI 1640 with 10% FBS
Undiluted	ng/mL	21.4
	% Expected value	100
2	ng/mL	10.1
	% Expected value	94
4	ng/mL	5.1
	% Expected value	95
8	ng/mL	2.7
	% Expected value	98
16	ng/mL	1.3
	% Expected value	97

Linearity of dilution for spiked albumin

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.

Spiked Albumin was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in Sample Diluent NS.

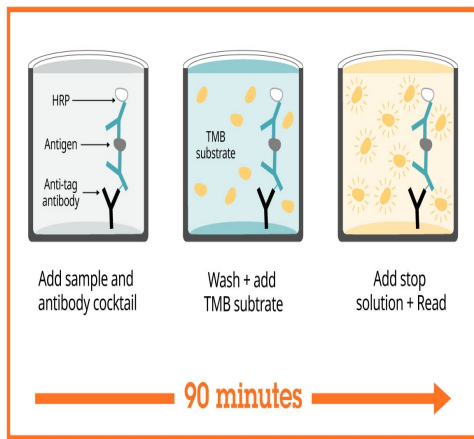
Dilution Factor	Interpolated value	1:4,000,000 Human Serum	1:8,000,000 Human Plasma (Citrate)	1:4,000,000 Human Plasma (EDTA)	1:8,000,000 Human Plasma (Heparin)
Undiluted	ng/mL	17.0	9.3	21.6	10.7
	% Expected value	100	100	100	100
2	ng/mL	7.9	4.3	9.4	5.0
	% Expected value	93	93	87	93
4	ng/mL	3.5	2.1	4.5	2.5
	% Expected value	82	90	83	92
8	ng/mL	1.9	1.2	2.2	1.3
	% Expected value	89	103	81	96
16	ng/mL	1.1	NL	1.2	0.7
	% Expected value	104		89	105

NL – Non-Linear

Linearity of dilution for albumin

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.

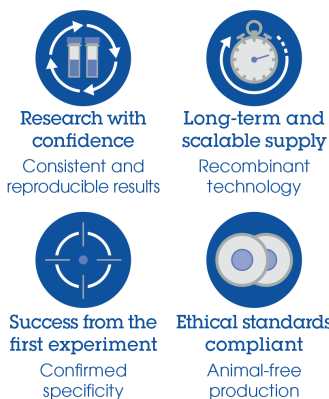
Native Albumin was measured in the following biological samples in a 2-fold dilution series. Sample dilutions are made in Sample Diluent NS.



Sandwich ELISA - Human Albumin ELISA Kit
(ab179887)

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.

Powered by
recombinant antibodies



Sandwich ELISA - Human Albumin ELISA Kit
(ab179887)

To learn more about the advantages of recombinant antibodies see [here](#).

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SimpleStep ELISA



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To learn more about the advantages of SimpleStep ELISA[®] kits see [here](#).

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