

Rat Retinol Binding Protein 4 ELISA Kit ab203362

Recombinant SimpleStep ELISA[®]

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Overview

Product name Rat Retinol Binding Protein 4 ELISA Kit

Detection method Colorimetric

Precision	Intra-assay				
	Sample	n	Mean	SD	CV%
	Overall	5			3.3%

					Inter-assay
Sample	n	Mean	SD	CV%	
Overall	3			2.7%	

Sample type Cell culture supernatant, Urine, Serum, Plasma

Assay type Sandwich (quantitative)

Sensitivity 3.07 pg/ml

Range 13.3 pg/ml - 850 pg/ml

Recovery	Sample specific recovery		
	Sample type	Average %	Range
	Cell culture supernatant	116	109% - 126%
	Urine	104	103% - 105%
	Serum	113	107% - 116%
	Cit plasma	100	91% - 106%

Assay time 1h 30m

Assay duration One step assay

Species reactivity Reacts with: Rat

Does not react with: Sheep, Goat, Cow, Pig

Product overview

Rat Retinol Binding Protein 4 ELISA Kit (ab203362) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of Retinol Binding Protein 4 protein in cell culture supernatant, serum, urine, and plasma. It uses our proprietary SimpleStep ELISA® technology. Quantitate Rat Retinol Binding Protein 4 with 3.07 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

Retinol-Binding Protein 4 (RBP4) is a small, highly conserved member of the lipocalin superfamily involved in the transportation of retinol (Vitamin A) in blood. Synthesized in hepatocytes and adipocytes, RBP4 is also an adipokine involved in insulin resistance in the AG4KO mouse model. Elevated serum levels of RBP4 are seen in obesity and Type 2 diabetes.

Platform

Microplate (12 x 8 well strips)

Properties

Storage instructions

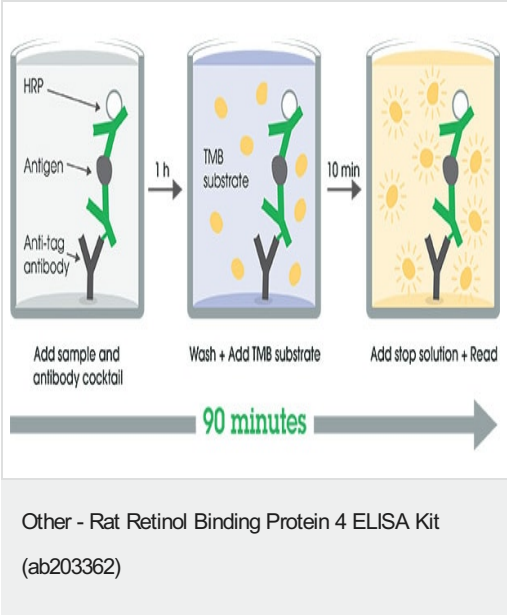
Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Rat RBP4 Capture Antibody	1 x 600µl
10X Rat RBP4 Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 4BC	1 x 6ml
Plate Seals	1 unit
Rat RBP4 Lyophilized Recombinant Protein (ab109146)	2 vials
Sample Diluent NS (ab193972)	1 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml

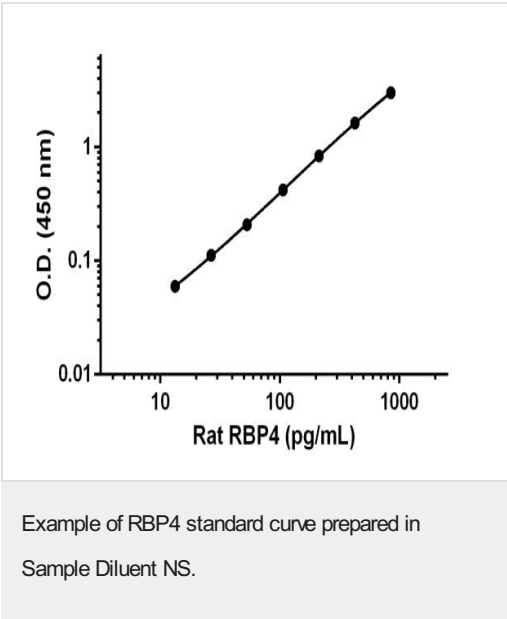
Components	1 x 96 tests
TMB Development Solution	1 x 12ml

Function	Delivers retinol from the liver stores to the peripheral tissues. In plasma, the RBP-retinol complex interacts with transthyretin, this prevents its loss by filtration through the kidney glomeruli.
Involvement in disease	Defects in RBP4 are a cause of retinol-binding protein deficiency (RBP deficiency) [MIM:180250]. This condition causes night vision problems. It produces a typical 'fundus xerophthalmicus', featuring a progressed atrophy of the retinal pigment epithelium.
Sequence similarities	Belongs to the calycin superfamily. Lipocalin family.
Cellular localization	Secreted.

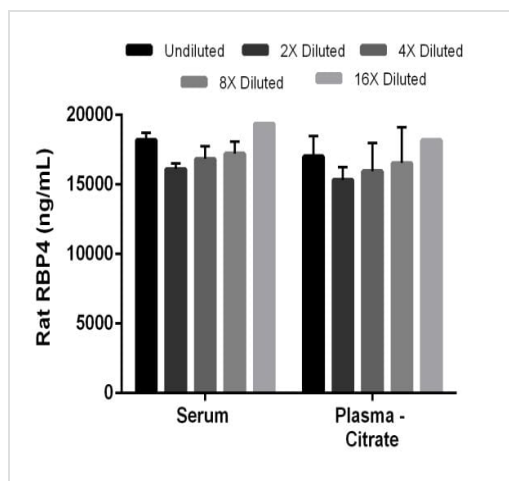
Images



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.



Interpolated concentrations of RBP4 in rat plasma (citrate) and serum.

The concentrations of RBP4 were measured in duplicate and interpolated from the RBP4 standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean \pm SD, n=2).

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recombinant antibodies

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Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Sandwich ELISA - Rat Retinol Binding Protein 4
ELISA Kit (ab203362)

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

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