



Mouse Retinol-binding protein,RBP ELISA Kit

Product Code	CSB-E09151m
Abbreviation	RBP4
Protein Biological Process 1	Transport
Target Name	retinol binding protein 4, plasma
Uniprot No.	Q00724
Alias	OTTHUMP00000020116 retinol-binding protein 4, interstitial retinol-binding protein 4, plasma
Product Type	ELISA Kit
Immunogen Species	Mus musculus (Mouse)
Protein Biological Process 3	Transport
Sample Types	serum, plasma, urine, tissue homogenates
Detection Range	0.312 µg/mL-20 µg/mL
Sensitivity	0.078 µg/mL
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Signal Transduction
Gene Names	Rbp4
Tag Info	quantitative
Protein Description	Competitive

Description

This mouse RBP4 ELISA kit employs the quantitative sandwich enzyme immunoassay technique to measure the levels of mouse RBP4 in multiple samples, including serum, plasma, urine, or tissue homogenates. It also uses the enzyme-substrate chromogenic reaction to visualize and analyze the analyte levels through the color intensity. The intensity of the colored product is in direct proportion to the RBP4 levels in the sample and is measured at 450 nm through a microplate reader.

RBP4 is the major transporter of the hydrophobic molecule retinol or vitamin A in circulation. It transports retinol from the liver to the peripheral tissues. Plasma RBP4 levels positively correlate with retinol levels. RBP4 also transports adipokine and fatty acid. Studies have found that RBP4 functions as a



hepatokine and mediates the effects of the molecular clock on glucose metabolism in mice. RBP4 is implicated in a variety of human conditions that include impaired vision and ocular diseases, disorders of glucose and lipid homeostasis, and cardiovascular diseases.

Target Details

This protein belongs to the lipocalin family and is the specific carrier for retinol (vitamin A alcohol) in the blood. It delivers retinol from the liver stores to the peripheral tissues. In plasma, the RBP-retinol complex interacts with transthyretin which prevents its loss by filtration through the kidney glomeruli. A deficiency of vitamin A blocks secretion of the binding protein posttranslationally and results in defective delivery and supply to the epidermal cells.

Product Precision

Intra-assay Precision (Precision within an assay): CV%<8%

Three samples of known concentration were tested twenty times on one plate to assess.

Inter-assay Precision (Precision between assays): CV%<10%

Three samples of known concentration were tested in twenty assays to assess.

Linearity

To assess the linearity of the assay, samples were spiked with high concentrations of mouse RBP in various matrices and diluted with the Sample Diluent to produce samples with values within the dynamic range of the assay.

?	Sample	Serum(n=4)
1:1	Average %	92
	Range %	86-96
1:2	Average %	95
	Range %	90-103
1:4	Average %	88
	Range %	85-93
1:8	Average %	87
	Range %	83-92

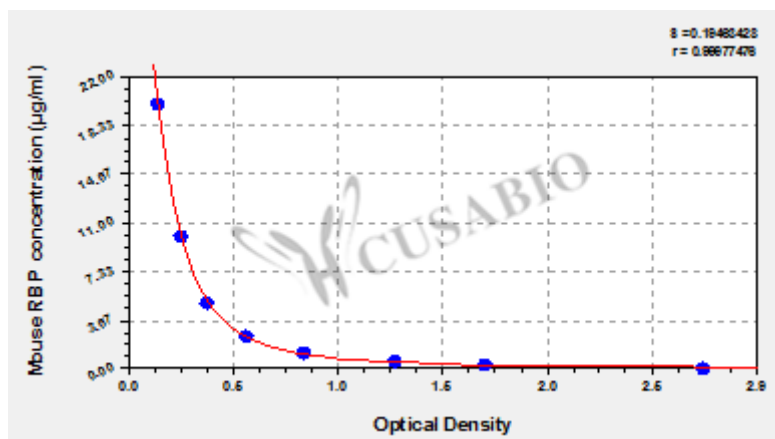
Recovery

The recovery of mouse RBP spiked to levels throughout the range of the assay in various matrices was evaluated. Samples were diluted prior to assay as directed in the Sample Preparation section.

Sample Type	Average % Recovery	Range
Serum (n=5)	99	93-104
EDTA plasma (n=4)	94	90-97

Typical

These standard curves are provided for demonstration only. A standard curve should be generated for each set of samples assayed.



µg/ml OD1 OD2 Average

20	0.157	0.145	0.151
10	0.259	0.264	0.262
5	0.369	0.385	0.377
2.5	0.587	0.545	0.566
1.25	0.830	0.823	0.827
0.625	1.278	1.233	1.256
0.312	1.646	1.696	1.671
0	2.622	2.745	2.684