



Human Retinol binding protein 4,RBP-4 ELISA Kit

Product Code	CSB-E09423h
Abbreviation	RBP4
Protein Biological Process 1	Neurobiology
Target Name	retinol binding protein 4, plasma
Uniprot No.	P02753
Alias	OTTHUMP00000020116 retinol-binding protein 4, interstitial retinol-binding protein 4, plasma
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Protein Biological Process 3	Sensory transduction
Sample Types	serum, plasma, tissue homogenates
Detection Range	15.6 ng/mL-1000 ng/mL
Sensitivity	3.9 ng/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	Sandwich

Description

The human RBP4 ELISA Kit is engineered for accurate measurement of human RBP4 levels from samples including serum, plasma, or tissue homogenates. It uses the Sandwich-ELISA mechanism in combination with the enzyme-substrate chromogenic reaction to measure the RBP4 content in the sample. The color intensity is positively correlated with RBP4 content in the sample. This kit has been validated against standards of sensitivity, specificity, precision, linearity, recovery, and lot-to-lot consistency.

RBP4 is primarily synthesized by the liver and adipose tissue and mainly functions to transport retinol from the liver to peripheral tissues. It thus is a critical regulator of retinoid homeostasis due to its specific retinoid transport property. Plasma RBP4 levels are in direct proportion to retinol levels. RBP4



appears to act through an unfavorable effect on insulin sensitivity, modifying insulin signaling in muscle, suppressing glucose uptake, and interfering with insulin-mediated inhibition of gluconeogenesis. RBP4 in urine is a functional biomarker of disease of the proximal renal tubule.

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 human RBP-4 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)
1:100	Average %	92
	Range %	87-98
1:200	Average %	98
	Range %	93-104
1:400	Average %	84
	Range %	82-88
1:800	Average %	90
	Range %	85-97

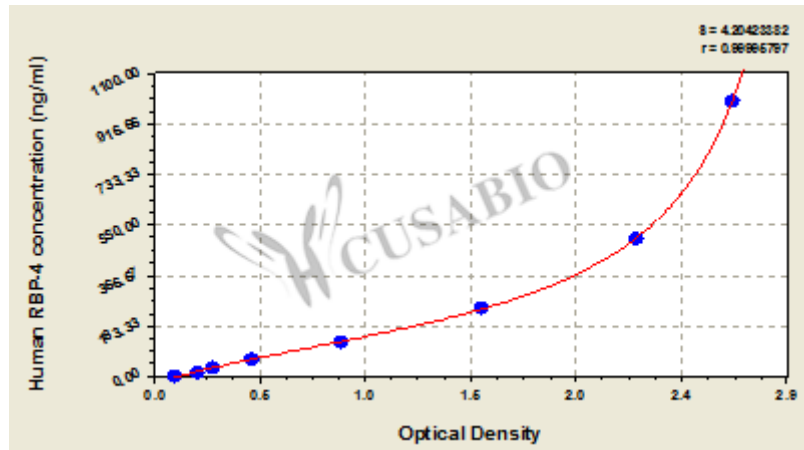
Recovery

The recovery of human RBP-4 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)	95	89-99
EDTA plasma (n=4)	96	90-102

Typical

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



ng/ml	OD1	OD2	Average	Corrected
1000	2.634	2.702	2.668	2.566
500	2.234	2.217	2.226	2.124
250	1.496	1.527	1.512	1.410
125	0.856	0.879	0.868	0.766
62.5	0.446	0.468	0.457	0.355
31.2	0.267	0.285	0.276	0.174
15.6	0.206	0.212	0.209	0.107
0	0.105	0.099	0.102	?

Msds

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