



Rat intestinal fatty acid binding protein,iFABP

ELISA Kit

Product Code	CSB-E08026r
Abbreviation	FABP2
Protein Biological Process 1	Transport
Target Name	fatty acid binding protein 2, intestinal
Uniprot No.	P02693
Alias	FABPI, I-FABP, MGC133132, intestinal fatty acid binding protein 2
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Transport
Sample Types	serum, plasma, urine, tissue homogenates
Detection Range	1.25 ng/mL-80 ng/mL
Sensitivity	0.312 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	Fabp2
Tag Info	quantitative
Protein Description	Sandwich

Description

CUSABIO's IFABP rat ELISA kit is an in vitro enzyme-linked immunosorbent assay for the quantitative measurement of rat IFABP in serum, plasma, urine, or tissue homogenates. This assay uses an antibody specific for rat IFABP coated on a 96-well plate. IFABP present in a sample is bound to the wells by the immobilized antibody after adding the sample into the wells. Biotinylated IFABP antibody is added to the wells, forming an antibody-analyte-antibody complex. HRP-conjugated avidin is pipetted to the wells and binds to the complex. A TMB substrate solution is added to the wells and color develops in proportion to the amount of IFABP bound. The addition of Stop Solution changes the color from blue to yellow, and the intensity of the color is measured at 450 nm using a microplate reader.



FABP2 is the encoding gene for IFABP, which is mainly expressed in intestinal epithelial cells. IFABP is released into the circulation after small intestinal mucosal damage and its plasma levels have been linked to small intestinal diseases such as necrotizing enterocolitis and celiac disease. IFABP plays important roles in several steps of fat absorption and transport, including the uptake and trafficking of saturated and unsaturated long-chain fatty acids, targeting free fatty acids toward different metabolic pathways, protecting the cytosol from the cytotoxic effects of free fatty acids, and regulating the enzyme activity involved in lipid metabolism.

Target Details

The intracellular fatty acid-binding proteins (FABPs) belong to a multigene family with nearly twenty identified members. FABPs are divided into at least three distinct types, namely the hepatic-, intestinal- and cardiac-type. They form 14-15 kDa proteins and are thought to participate in the uptake, intracellular metabolism and/or transport of long-chain fatty acids. They may also be responsible in the modulation of cell growth and proliferation. Intestinal fatty acid-binding protein 2 gene contains four exons and is an abundant cytosolic protein in small intestine epithelial cells. This gene has a polymorphism at codon 54 that identified an alanine-encoding allele and a threonine-encoding allele. Thr-54 protein is associated with increased fat oxidation and insulin resistance.

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 rat iFABP 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 %	96
	Range %	89-101
1:2	Average %	93
	Range %	87-99
1:4	Average %	90
	Range %	85-95
1:8	Average %	104
	Range %	98-108

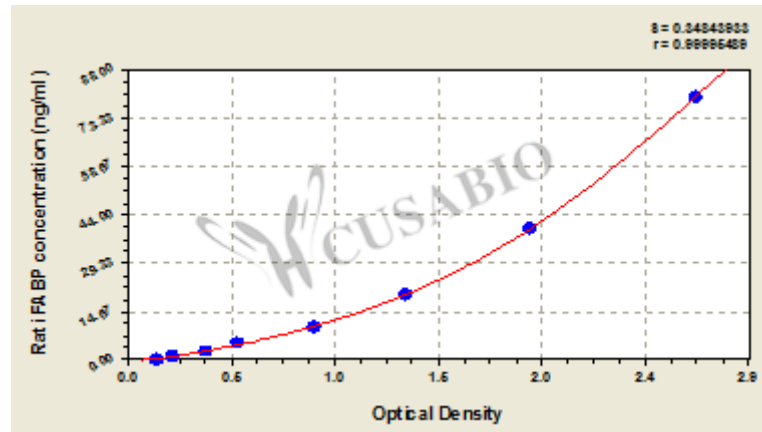
Recovery

The recovery of rat iFABP 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)	96	90-102
EDTA plasma (n=4)	93	89-96

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
80	2.695	2.671	2.683	2.536
40	1.915	1.901	1.908	1.761
20	1.306	1.334	1.320	1.173
10	0.884	0.899	0.892	0.745
5	0.517	0.537	0.527	0.380
2.5	0.375	0.384	0.380	0.233
1.25	0.211	0.233	0.222	0.075
0	0.145	0.149	0.147	?

Msds

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