Rat heart fatty acid binding protein(h-FABP)ELISA Kit

Product Code	CSB-E16184r
Abbreviation	FABP3
Protein Biological Process 1	Transport
Target Name	fatty acid binding protein 3, muscle and heart (mammary-derived growth inhibitor)
Uniprot No.	P07483
Alias	FABP11, H-FABP, MDGI, O-FABP, Fatty acid-binding protein 3, muscle|fatty acid binding protein 11|fatty acid binding protein 3|mammary-derived growth inhibitor
Product Type	ELISA Kit
Immunogen Species	Rattus norvegicus (Rat)
Protein Biological Process 3	Transport
Sample Types	serum, plasma, cell culture supernates, tissue homogenates
Detection Range	15.6 pg/mL-1000 pg/mL
Sensitivity	3.9 pg/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	Fabp3
Tag Info	quantitative
Protein Description	Sandwich
Description	The rat heart fatty acid-binding protein (h-FABP) ELISA Kit is used to quantitatively measure rat h-FABP levels in serum, plasma, cell culture supernates, or tissue homogenates. It performs well in important characteristics, including sensitivity and specificity. This assay is based on the sandwich ELISA mechanism and enzyme-substrate chromogenic reaction. The solution color develops proportionally to the amount of h-FABP in the sample. And the intensity of the color can be measured at 450 nm via a microplate reader.

h-FABP, also called FABP3, is ubiquitously expressed in the heart, skeletal muscle, and other tissues. It participates in maintaining an energy supply to the heart and other body parts, as well as in regulating the intramuscular fat content and improving insulin sensitivity. FABP3 binds to free long-chain fatty acids (LCFAs) and transports them for cell metabolism, thus protecting against lipid toxicity. Studies have demonstrated that deficiencies in FABP3 exacerbate metabolic derangement in cardiac Hypertrophy and heart failure via the PPARα pathway.

Target Details

The intracellular fatty acid-binding proteins (FABPs) belongs to a multigene family. 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. Fatty acid-binding protein 3 gene contains four exons and its function is to arrest growth of mammary epithelial cells. This gene is a candidate tumor suppressor gene for human breast cancer.

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 h-FABP 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 %	85
	Range %	84-92
1:2	Average %	96
	Range %	91-102
1:4	Average %	84
	Range %	81-88
1:8	Average %	94
	Range %	90-98

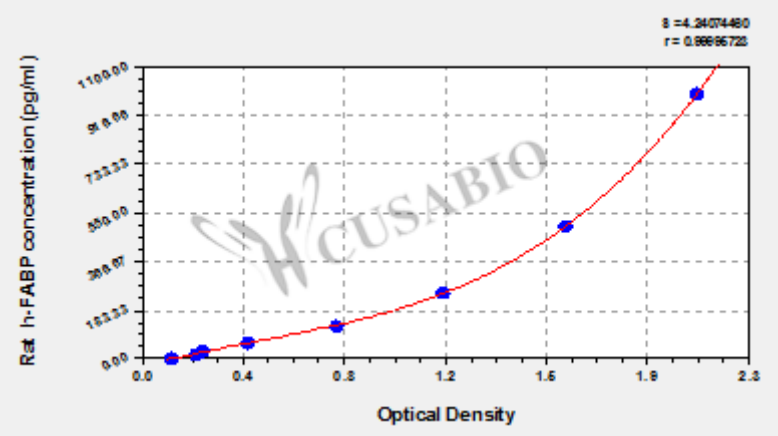
Recovery

The recovery of rat h-FABP 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)	92	87-95
EDTA plasma (n=4)	103	95-108

Typical

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



pg/ml	OD1	OD2	Average	Corrected
1000	2.095	2.086	2.091	1.967
500	1.550	1.648	1.599	1.475
250	1.121	1.156	1.139	1.015
125	0.728	0.751	0.740	0.616
62.5	0.417	0.403	0.410	0.286
31.2	0.241	0.237	0.239	0.115
15.6	0.211	0.214	0.213	0.089
0	0.119	0.129	0.124	?

Msds

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