PRODUCT INFORMATION

FABP1 (rat recombinant)

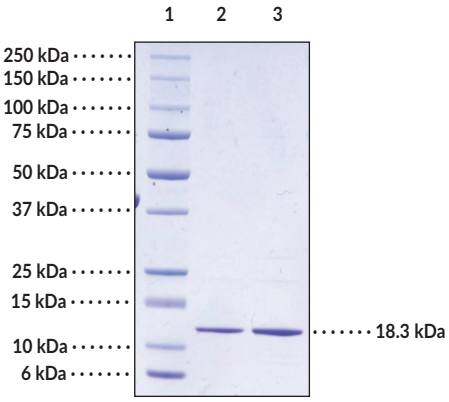
Item No. 10005200

Overview and Properties

Synonyms: Fatty Acid Binding Protein 1, L-FABP, Liver-FABP, Liver-Fatty Acid Binding Protein
Source: Recombinant N-terminal hexahistidine-tagged protein expressed in *E. coli*
Molecular Weight: 18.3 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥90% estimated by SDS-PAGE
Supplied in: 50 mM of sodium phosphate, pH 7.2, with 20% glycerol and 150 mM sodium chloride

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: FABP1 (2 µg)
Lane 3: FABP1 (4 µg)

SDS-PAGE Analysis of FABP1.

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Description

Fatty acid binding protein 1 (FABP1) is one of nine known cytosolic FABPs ranging in size from 14-15 kDa containing 127-132 amino acids.[1] Members of this protein family exhibit high affinity for small lipophilic ligands and were named according to the tissue from which they were initially isolated.[1] Studies suggest that FABPs are involved in the uptake and metabolism of fatty acids, in the maintenance of cellular membrane fatty acid levels, in intracellular trafficking of these substrates, in the modulation of specific enzymes of lipid metabolic pathways, and in the modulation of cell growth and differentiation.[2] FABP family members have highly conserved three dimensional structures and 22-73% amino acid sequence similarity. FABP1 is composed of ten antiparallel β strands that form a barrel. It has a bigger binding pocket than the other FABPs allowing it to accommodate two fatty acids. Expression of FABP1 is decreased in hepatoblastoma and hepatocellular carcinoma making the protein a potential tumor marker. Moreover, studies have suggested FABP1 as a potential biomarker for both liver and kidney injury.[1]

References

1. Zimmerman, A.W. and Veerkamp, J.H. New insights into the structure and function of fatty acid-binding proteins. *Cell. Mol. Life Sci.* **59**, 1096-1116 (2002).
2. Massolini, G. and Calleri, E. Survey of binding properties of fatty acid-binding proteins chromatographic methods. *J. Chromatogr. B* **797**, 255-268 (2003).

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