LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human FABP7 Protein
Catalog Number: hRP-1840
Manufacturer: LD Biopharma, Inc.

Introduction

The fatty-acid-binding proteins (FABPs) are a family of transport proteins for fatty acids and other lipophilic substances such as eicosanoids and retinoids. These proteins are thought to facilitate the transfer of fatty acids between extra- and intracellular membranes. Some family members are also believed to transport lipophilic molecules from outer cell membrane to certain intracellular receptors such as PPAR. Levels of fatty-acid-binding protein have been shown to decline with ageing in the mouse brain, possibly contributing to age-associated decline in synaptic activity. FABP7 protein is important in the establishment of the radial glial fiber in the developing brain. Recent data indicated that expression level of human FABP7 protein is variable in multiple types of tumors, which could be used for prognosis application. Furthermore, up-regulation of FABP7 is strongly associated with poor survival in clear cell renal cell carcinoma.

Full-length of human FABP7 cDNA (derived from BC012299) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (31aa) fusion at its N-terminal. This protein was expressed in E. coli as inclusion bodies. The final product was refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

Gene Symbol:	FABP7 (B-FABP; BLBP; MRG)
Accession Number:	NP_001437
Species:	Human
Size:	50 µg / Vial
Composition:	0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

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Shimamoto C, et al., *Functional characterization of FABP3, 5 and 7 gene variants identified in schizophrenia and autism spectrum disorder and mouse behavioral studies*. Hum. Mol. Genet. 23 (24), 6495-6511 (2014)

Zhou J, et al., *Overexpression of FABP7 promotes cell growth and predicts poor prognosis of clear cell renal cell carcinoma*. Urol. Oncol. 33 (3), 113 (2015)

Gromov P, et al., *FABP7 and HMGCS2 are novel protein markers for apocrine differentiation categorizing apocrine carcinoma of the breast*
PLoS ONE 9 (11), E112024 (2014)

Shimizu F, et al., *Isolation and expression of a cDNA for human brain fatty acid-binding protein (B-FABP)*. Biochim. Biophys. Acta 1354 (1), 24-28 (1997)

Applications

1. May be used for in vitro FABP7 mediated long-chain fatty acid metabolism regulation study for cancer cells or neuronal cell differentiation regulation by intracellular delivery of this protein with ProFectin Reagent.
2. May be used for protein-protein interaction mapping.
3. As enzymatic substrate for various proteases.
4. Potential biomarker protein for cancer diagnostic application.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNLYFQGGEFKLVEAFCATWKLTNSQNFDEYMKALGVGFATRQVG
NVTKPTVIISQEGDKVVIRTLSTFKNTEISFQLGEEFDETTADDRNCKSVVSLDGDKLVHIQKW
DGKETNFVREIKDGKMVMTLTFGDVVAVRHYEKA