



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human FAM3B Protein
Catalog Number: hRP-1455
Manufacturer: LD Biopharma, Inc.

Introduction

Family with sequence similarity 3 (FAM3) is a cytokine-like gene family. There are four members in this family (FAM3A, FAM3B, FAM3C and FAM3D). The human and mouse FAM3B both have 235 amino acids, sharing 78% identity at amino acid level with 4 conserved cysteines. FAM3B is also named pancreatic-derived factor (PANDER) due to its expression in pancreatic α - and β -cells. Human FAM3B mRNA is expressed highly in pancreas, also expressed in hepatocytes, Purkinje cells in the cerebellum, neurons in the brainstem, and spermatids in testis. In vitro studies demonstrate that FAM3B expression is upregulated by glucose, fatty acids, CCL2, IFN γ alone or combined with IL-1 β and TNF α in β -cells, and by insulin and arginine in α -cells. Initial in vitro studies revealed a potential role of FAM3B in pancreatic islet apoptosis. However, animal studies indicate that FAM3B is involved in the regulation of glucose metabolism and lipogenesis by interaction with endocrine pancreas and liver. Recent study showed that mouse FAM3B mRNA is not only expressed in tissues reported before, but also in a broad range of other tissues, including muscle, white and brown fat tissues, small and large intestines, stomach, kidney and heart, suggesting that FAM3B may play a general role in maintaining cell function.

Full-length mature human FAM3B cDNA 30 - 235 aa, Isoform-a, derived from BC057829) was constructed with fully codon optimization strategy and expressed in non-fusion form as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: FAM3B (PANDER)
Accession Number: NP_478066.3
Species: Human
Size: 50 μ g / 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.



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Key References

Robert-Cooperman CE, et al., *PANDER transgenic mice display fasting hyperglycemia and hepatic insulin resistance*. J. Endocrinol. 220 (3), 219-231 (2014)

Mou H, et al., *Knockdown of FAM3B triggers cell apoptosis through p53-dependent pathway*. Int. J. Biochem. Cell Biol. 45 (3), 684-691 (2013)

Yang J, et al., *Mechanisms of glucose-induced secretion of pancreatic-derived factor (PANDER or FAM3B) in pancreatic beta-cells*. Diabetes 54 (11), 3217-3228 (2005)

Applications

1. May be used for in vitro human FAM3B mediated metabolic pathway regulation study for pancreatic beta cell, adipocytes and hepatocytes with this protein as either coating matrix protein or soluble factor.
2. May be used for protein-protein interaction assay.
3. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MTLHRNEYGIASILDSYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLLENQLPAFLLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNKF IYEIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHHGSENLYFQGELIPDAPLSSAAYSIRSIGERPVLKAPVPKRQKCDHWTP
CPSDTYAYRLLSGGGRSKYAKICFEDNLLMGEQLGNVARGINIAIVNYVTGNVTATRCFDMYEG
DNSGPMTKFIQSAAPKSLLFMVTYDDGSTRLNNDAKNAIEALGSKEIRNMKFRSSWVFI AAKGL
ELPSEIQREKINHSDAKNNRYSGWPAEIQIEGCI PKERS