
Product Data Sheet

Product Name: Visfatin Mouse
 Cat. No.: GP21061
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.

Synonyms PBEF; Pre-B cell colony-enhancing factor; Nicotinamide phosphoribosyltransferase NAmPRTase; Nampt; MGC117256; DKFZP666B131; 1110035O14Rik.

Amino Acid Sequence
 MGSSHHHHHH SGLVPRGSH MNAAAEAEFN ILLATDSYKV THYKQYPPNT
 SKVYSYFECREKKTENSKVR KVKYEETVFY GLQYILNKYL KGKVVTKKEI
 QEAKEVYREH FQDDVFNERGWNYILEKYDG HLPPIEVKAVP EGSVIPRGNV
 LFTVENTDPE CYWLTNWIET ILVQSWYPITVATNSREQK ILAKYLLETS
 GNLDGLEYKL HDFGYRGVSS QETAGIGASA HLVNFKGTDT VAGIALIKKY
 YGTKDPVPGY SVPAAEHSTI TAWGKDHEKD AFEHIVTQFS SVPVSVVSDS
 YDIYNACEKI WGEDLRHLIV SRSTEAPLII RPDSGNPLDT VLKVL DILGK
 KFPVTENSKG YKLLPPYLRV IQGDGVDINT LQEIVEGMKQ KKWSIENVSF
 GSGGALLQKL TRDLLNCSFK CSYVVTNGLG VNVFKDPVAD PNKRSKKGRL
 SLHRTPAGNF VTLEEGKGDLE EYGHDLHTVFKNGKVTKS YSFDEVRKNA
 QLNIEQDVAP H.

Formulation The protein solution contains 1x PBS pH-7.4.

Introduction

Excess adiposity is the most important risk in the development of insulin resistance and type 2 diabetes mellitus (T2DM). Adipose tissue produces several proteins (adipocytokines) such as leptin, adiponectin, resistin, tumor necrosis factor- α , and IL-6, that modulate insulin sensitivity and appear to play an important role in the pathogenesis of insulin resistance, diabetes, dyslipidemia, inflammation, and atherosclerosis. However, the mechanisms by which fat tissue induces insulin resistance and the role of adipocytokines in the pathogenesis of T2DM have not been well established. Visfatin, also known as pre-B cell colony-enhancing factor (PBEF), is a

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Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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cytokine that is highly expressed in visceral fat and was originally isolated as a secreted factor that synergizes with IL-7 and stem cell factors to promote the growth of B cell precursors. Visfatin homologs have been identified in carp, invertebrate mollusks, and bacteria, as well as in vertebrates, including humans and the mouse. It has been postulated to play a role in innate immunity. Visfatin exerts insulin-mimetic effects that are dose-dependent and quantitatively similar to those of insulin in stimulating muscle and adipocyte glucose transport, and in inhibiting hepatocyte glucose production. Intravenous injection of recombinant visfatin in mice decreased plasma glucose in a dose-dependent fashion. In keeping with its insulin-mimetic effects, visfatin was as effective as insulin in reducing hyperglycemia in insulin-deficient diabetic mice. Visfatin was also found to be bound to and activate insulin receptor, causing receptor phosphorylation and the activation of downstream signaling molecules. However, visfatin and insulin did not compete for binding to the insulin receptor, indicating that the two proteins were recognized by different regions of the receptor. Thus, visfatin might play a role in glucose homeostasis and dysregulation in biosynthesis or signal transduction, and might contribute to the pathogenesis of diabetes.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze thaw cycles.

Background

Visfatin Mouse Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain (aa 1-491) containing a 20 aa His tag and having 511 amino acids. The total molecular mass is 57kDa. The Visfatin is purified by proprietary chromatographic techniques.

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