Product Data Sheet

Product Name:	Visfatin Human
Cat. No.:	GP21059
Batch No.:	1

Product Data

Purity	>98%	Source	Escherichia Coli.
Phycical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	PBEF; Pre-B cell colony-enhancing factor; Nicotinamide phosphoribosyltransferase NAmPRTase; Nampt; MGC117256; DKFZP666B131; 1110035O14Rik.		
Amino Acid Sequence	MPPNTSKVYS YFECREKKTE NSKLRKVKYE ETVFYGLQYI LNKYLKGKVV TKEKIQEAKD VYKEHFQDDV FNEKGWNYIL EKYDGHLPIE IKAVPEGFVI PRGNVLFTVE NTDPECYWLT NWIETILVQS WYPITVATNS REQKKILAKY LLETSGNLDG LEYKLHDFGY RGVSSQETAG IGASAHLVNF KGTDTVAGLA LIKKYYGTKD PVPGYSVPAA EHSTITAWGK DHEKDAFEHI VTQFSSVPVS VVSDSYDIYN ACEKIWGEDL RHLIVSRSTQ APLIIRPDSG NPLDTVLKVL EILGKKFPVT ENSKGYKLLP PYLRVIQGDG VDINTLQEIV EGMKQKMWSI ENIAFGSGGG LLQKLTRDLL NCSFKCSYVV TNGLGINVFK DPVADPNKRS KKGRLSLHRT PAGNFVTLEE GKGDLEEYGQ DLLHTVFKNG KVTKSYSFDE IRKNAQLNIE LEAAHH.		
Solubility	Centrifuge vial before opening. When reconstituting the product, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. It is recommended to reconstitute the lyophilized product with 20 mM HCl at a concentration of 0.1 mg/mL, which can be further diluted into other aqueous solutions. Wait several minutes for full reconstitution and solubility.		
Formulation	Visfatin was lyophilized with no additives.		

Introduction

Excess adiposity is the most important risk in the development of type 2 diabetes mellitus (T2DM). Adipose tissue produces several proteins (adipocytokines) such as leptin, adiponectin, resistin, tumor necrosis factor-a, and IL-6, that modulate sensitivity

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and appear to play an important role in the pathogenesis, diabetes, dyslipidemia, inflammation, and atherosclerosis. Visfatin, also known as pre-B cell colony-enhancing factor (PBEF), is a 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 mimetic effects that are dose-dependent and quantitatively similar to 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 mimetic effects, visfatin was as effective in reducing hyperglycemia in deficient diabetic mice. Visfatin was also found to be bound to and activate receptor, causing receptor phosphorylation and the activation of downstream signaling molecules. However, visfatin did not compete for binding to the 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.

Biological Activity

The activity is determined by its ability to induce IL-6, IL-1 beta and TNF alpha production from human PBMCs at 100ng/ml.

Stability

Lyophilized Visfatin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution Visfatin should be stored at 4°C between 2-7 days and for future use below-18°C .For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

Background

Visfatin Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 466 amino acids. The total molecular mass is 52.6kDa (calculated). The Visfatin is purified by Flag-affinity chromatography.