

32-1850: Visfatin His Recombinant Protein

Alternative Name : PBEF, Pre-B cell colony-enhancing factor, Nicotinamide phosphoribosyltransferase, NAMPTase, Nampt, MGC117256, DKFZP666B131, 1110035O14Rik.

Description

Source : Escherichia Coli. Visfatin Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 511 amino acids and having a molecular mass of 57 kDa. The recombinant human Visfatin is fused to His tag at N-Terminus. 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 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.

Product Info

Amount : 25 μ g
Purification : Greater than 95.0% as determined by (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Content : Visfatin His tag protein contains 20mM Tris pH-8, 0.1mM DTT & 10% glycerol.
Storage condition : Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. Please avoid freeze thaw cycles.
Amino Acid : MGSSHHHHHH SGLVPRGSH MNPAAAEFN ILLATDSYKV THYKQYPPNT SKVYSYFECE
EKKTENSCLR KVKYEETVFY GLQYILNKYL KGKVVTKKEI QEAKDVYKEH FQDDVFNEKG
WNYILEKYDG HLPKIEKAVP EGFVIPRGV LFTVENTDPE CYWLTNWIET ILVQSWYPIT
VATNSREQKK ILAKYLLETS GNLDGLETKL HDFGYRGVSS QETAGIGASA HLVNFKGTDT
VAGLALIKKY YGTDKDPVPGY SVPAAEHSTI TAWGKDHEKD AFEHIVTQFS SVPVSVVSDS
YDIYNACEKI WGEDLRHLIV SRSTQAPLII RPDSGNPLDT VLKVLLEILGK KFPVTENSKG
YKLLPPYLRV IQGDGVLDINT LQEIIEGMMKQ KMWSIENIAF GSGGGLLQKL TRDLLNCSFK
CSYVVVTNGLG INVFKDPVAD PNKRSKKGRL SLHRTPAGNF VTLEEGKGDL EYGGQDLLHT
VFKNGKVTKS YSFDEIRKNA QLNIELEAAH H.

