#### **Human Recombinant Visfatin**

**Cytokines** 

Visfatin

100 µg



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Catalog #100-1335

### **Product Description**

Visfatin, also known as pre-B-cell colony-enhancing factor 1 (PBEF1), is an adipokine belonging to the nicotinate phosphoribosyltransferase (NAPRTase) family. Visfatin is notably produced in adipocytes, leukocytes, and hepatocytes (Chiu et al., Garten et al., Kralisch et al.). It is active as a homodimer with each identical monomer consisting of two structural domains made up of 19  $\beta$ -strands and 13  $\alpha$ -helices (Kim et al.). A key function of visfatin is catalyzing the production of nicotinamide mononucleotide from nicotinamide (Revollo et al.). Nicotinamide mononucleotide is a precursor to nicotinamide adenine dinucleotide (NAD), which is vital to energy metabolism, cell death, and other cellular processes (Ying). Visfatin also acts as an immunomodulator by activating leukocytes and inducing the production of pro-inflammatory and anti-inflammatory cytokines (Moschen et al.). There is also evidence that visfatin can regulate insulin receptor signaling and insulin secretion (Brown et al.).

### **Product Information**

Alternative Names: NAMPT, PBEF, PBEF1

Accession Number: P43490 (Pro27-His491) was expressed with an additional Met.

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

Predicted Molecular Mass: 52.7 kDa Species: Human

Formulation: Lyophilized from a sterile aqueous solution containing 0.1% trifluoroacetic acid (TFA).

Source: E. coli

# Specifications

Activity: Not available Purity: ≥ 90%

Endotoxin Level: Measured by kinetic Limulus amebocyte lysate (LAL) analysis and is ≤ 1 EU/µg protein.

# Preparation and Storage

Storage: Store at -20 to -80°C.

Stability: Stable as supplied for 12 months from date of receipt.

Preparation: Centrifuge vial before opening. Reconstitute the product in sterile water to at least 0.1 mg/mL by pipetting the

solution down the sides of the vial. Do not vortex. As a general guide, do not store at 2 - 8°C for more than

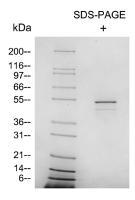
1 month or at -80°C for more than 3 months. Avoid repeated freeze-thaw cycles.

### **Cytokines**

#### **Human Recombinant Visfatin**



#### Data



Human Recombinant Visfatin was resolved with SDS-PAGE under reducing (+) conditions and visualized by Coomassie Blue staining. Human Recombinant Visfatin has a predicted molecular mass of 52.7 kDa.

### Related Products

For a complete list of cytokines, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/cytokines, or contact us at techsupport@stemcell.com.

### References

Brown JEP et al. (2010) Visfatin regulates insulin secretion, insulin receptor signalling and mRNA expression of diabetes-related genes in mouse pancreatic β-cells. J Mol Endocrinol 44(3): 171–8.

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Kim MK et al. (2006) Crystal structure of visfatin/pre-b cell colony-enhancing factor 1/nicotinamide phosphoribosyltransferase, free and in complex with the anti-cancer agent FK-866. J Mol Biol 362(1): 66–77.

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Moschen AR et al. (2007) Visfatin, an adipocytokine with proinflammatory and immunomodulating properties. J Immunol 178(3): 1748-58.

Revollo JR et al. (2007) The regulation of nicotinamide adenine dinucleotide biosynthesis by Nampt/PBEF/visfatin in mammals. Curr Opin Gastroenterol 23(2): 164–70.

Ying W. (2006) NAD+ and NADH in cellular functions and cell death. Front Biosci 11(SUPPL. 3): 3129-48.

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