Recombinant Human PBEF/Visfatin

Catalog Number: 8424-VF

DESCRIPTION

Source	*E. coli*-derived Asn2-His491, with an N-terminal Met and 6-His tag Accession # P43490
N-terminal Sequence Analysis	Met
Predicted Molecular Mass	56 kDa

SPECIFICATIONS

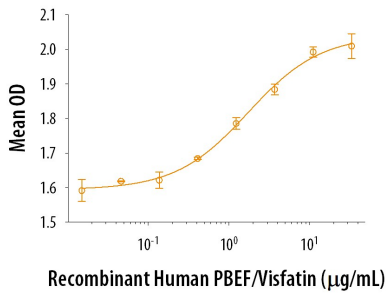
SDS-PAGE	55 kDa, reducing conditions
Activity	Measured by its ability to induce VEGF secretion by PC-3 human prostate cancer cells. The ED_{50} for this effect is typically 1-5 µg/mL
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>90%, by SDS-PAGE with silver staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in HEPES, NaCl, EDTA, TCEP and Tween. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity



Recombinant Human PBEF/Visfatin (Catalog # 8424-VF) induces VEGF secretion by PC-3 human prostate cancer cells. The ED_{50} for this effect is typically 1-5 µg/mL

BACKGROUND

PBEF, also called Visfatin and NAMPT, is a dimeric type II phosphoribosyltransferase (1). It was initially identified as a secreted cytokine that synergized with IL-7 and SCF to stimulate early stage B cells (2). Human PBEF is predominantly expressed in bone marrow, liver, and muscle, with lower levels found in placenta, kidney, heart, and lung (2). Human PBEF shares 96% and 95% amino acid sequence identity with mouse and rat PBEF, respectively. PBEF has been identified both as an intracellular and as an extracellular protein. Within the cell, PBEF converts nicotinamide to nicotinamide mononucleotide (NMN), which is the rate limiting step in the production of nicotinamide adenine dinucleotide (NAD^+) (3, 4). In the extracellular environment, PBEF has been reported to increase the production of inflammatory cytokines and have an important role in the development of T and B cells (5-7). Additionally, PBEF may promote angiogenesis *in vivo* in an ERK1/2-dependent manner (8). PBEF has been implicated in several inflammatory diseases, including rheumatoid arthritis, osteoarthritis, inflammatory bowel disease, and sepsis (9). PBEF over-expression has been observed in many cancer types (10).

References:

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