

AP23431PU-S**Polyclonal Antibody to Visfatin / NAMPT - Aff - Purified****Alternate names:**

NAMPRTase, Nicotinamide phosphoribosyltransferase, PBEF, PBEF1, Pre-B-cell colony-enhancing factor 1

Quantity:

50 µg

Background:

Visfatin, a newly identified adipocytokine, which is predominantly secreted from visceral adipose tissue both in humans and mice. Visfatin corresponds to a protein identified previously as pre-B cell colony-enhancing factor (PBEF). Visfatin exerted insulin-mimetic effects in cultured cells, various insulin-sensitive tissues such as liver, muscle, and fat, and lowered plasma glucose levels in mice. Mice heterozygous for a targeted mutation in the visfatin gene had modestly higher levels of plasma glucose relative to wild-type littermates. Visfatin binds to and activates the insulin receptor. Which may lead to new insights into glucose homeostasis and/or new therapies for metabolic disorders such as diabetes.

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-alpha, 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.

Uniprot ID:[P43490](#)**NCBI:**[NP_005737](#)**GeneID:**[10135](#)**Host:**

Rabbit

Immunogen:	Highly pure E.coli derived recombinant Human Visfatin.
Format:	State: Lyophilized (sterile filtered) purified Ig fraction Purification: Affinity Chromatography employing an immobilized Human Visfatin matrix. Buffer System: PBS, pH 7.2 without preservatives Reconstitution: Centrifuge vial prior to opening. Restore in sterile water to a concentration of 0.1-1.0 mg/ml.
Applications:	Sandwich ELISA: To detect Human Visfatin by Sandwich ELISA (using 100µl/well antibody solution) a concentration of 0.5-2.0 µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with Biotinylated Anti-Human Visfatin (AP23431BT-N or AP23431BT-S) as a detection antibody, allows the detection of at least 0.2-0.4 ng/well of recombinant Human Visfatin. Western Blot: To detect Human Visfatin by Western Blot analysis this antibody can be used at a concentration of 0.1-0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant Human Visfatin is 1.5-3.0 ng/lane, under either reducing or non-reducing conditions. Immunohistochemistry: The antibody stained FFPE Sections of human ovary malignant adeoncarcinoma. An HRP-labelled polymer detection system was used with a DAB chromogen). Heat induced antigen retrieval with pH 6.0 Sodium Citrate buffer is recommended. <i>Working Dilution:</i> 7.5-15 ng/ml, overnight incubation at 4°C. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	Recognizes Visfatin Species: Human. Other species not tested.
Storage:	Store the lyophilized antibody at -20°C. Following reconstitution it is stable for two weeks at 2-8°C. Frozen aliquots are stable for 6 months when stored at -20°C. Avoid repeated freezing and thawing. Shelf life: One year from despatch.