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NAMPT Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9010c

Product Information

Application	WB, IHC-P, E
Primary Accession	P43490
Other Accession	Q80Z29, Q52I78, Q99KQ4
Reactivity	Human
Predicted	Mouse, Pig, Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	55521
Antigen Region	400-426

Additional Information

Gene ID	10135
Other Names	Nicotinamide phosphoribosyltransferase, NAmPRTase, Nampt, Pre-B-cell colony-enhancing factor 1, Pre-B cell-enhancing factor, Visfatin, NAMPT, PBEF, PBEF1
Target/Specificity	This NAMPT antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 400-426 amino acids from the Central region of human NAMPT.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NAMPT Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NAMPT
Synonyms	PBEF, PBEF1

Function	Catalyzes the condensation of nicotinamide with 5-phosphoribosyl-1-pyrophosphate to yield nicotinamide mononucleotide, an intermediate in the biosynthesis of NAD. It is the rate limiting component in the mammalian NAD biosynthesis pathway. The secreted form behaves both as a cytokine with immunomodulating properties and an adipokine with anti-diabetic properties, it has no enzymatic activity, partly because of lack of activation by ATP, which has a low level in extracellular space and plasma. Plays a role in the modulation of circadian clock function. NAMPT-dependent oscillatory production of NAD regulates oscillation of clock target gene expression by releasing the core clock component: CLOCK-BMAL1 heterodimer from NAD-dependent SIRT1- mediated suppression (By similarity).
Cellular Location	Nucleus. Cytoplasm {ECO:0000250|UniProtKB:Q99KQ4}. Secreted Note=Under non-inflammatory conditions, visfatin predominantly exhibits a granular pattern within the nucleus. Secreted by endothelial cells upon IL-1beta stimulation. Abundantly secreted in milk, reaching 100- fold higher concentrations compared to maternal serum
Tissue Location	Expressed in large amounts in bone marrow, liver tissue, and muscle. Also present in heart, placenta, lung, and kidney tissues

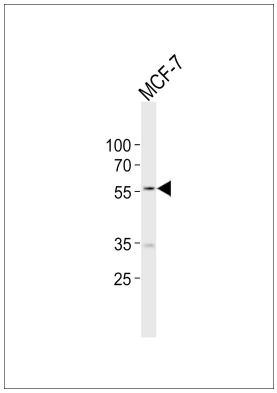
Background

NAMPT catalyzes the condensation of nicotinamide with 5-phosphoribosyl-1-pyrophosphate to yield nicotinamide mononucleotide, one step in the biosynthesis of nicotinamide adenine dinucleotide. The protein is an adipokine that is localized to the bloodstream and has various functions, including the promotion of vascular smooth muscle cell maturation and inhibition of neutrophil apoptosis. It also activates insulin receptor and has insulin-mimetic effects, lowering blood glucose and improving insulin sensitivity. The protein is highly expressed in visceral fat and serum levels of the protein correlate with obesity.

References

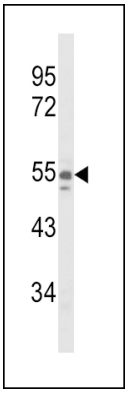
Samal,B., et.al., Mol. Cell. Biol. 14 (2), 1431-1437 (1994)

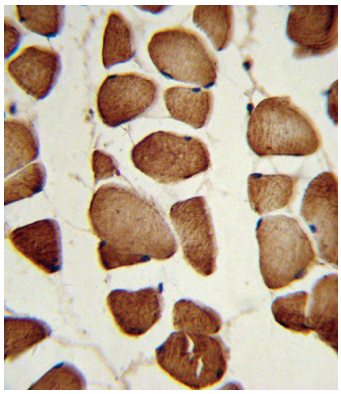
Images



Western blot analysis of lysate from MCF-7 cell line, using NAMPT Antibody (Center)(Cat. #AP9010c). AP9010c was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20ug.

Western blot analysis of NAMPT Antibody (Center) (Cat. #AP9010c) in A375 cell line lysates (35ug/lane). NAMPT (arrow) was detected using the purified Pab.





Formalin-fixed and paraffin-embedded human skeletal muscle reacted with NAMPT Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

Citations

- Effect of Phosphoribosyltransferase Down-regulation on Malignant Glioma Cell Characteristics
- Inhibition of nicotinamide phosphoribosyltransferase: cellular bioenergetics reveals a mitochondrial insensitive NAD pool.
- Nicotinamide phosphoribosyl transferase (Nampt) is a target of microRNA-26b in colorectal cancer cells.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.