

Recombinant Rat NAMPT Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52544

Size: 10ug, 100ug

Protein Name: Nicotinamide phosphoribosyltransferase (NAmPRTase) (Nampt) (EC 2.4.2.12) (Pre-B-cell colony-enhancing factor 1 homolog) (PBEF) (Visfatin)

Synonym: Nampt, Pbef1

UniProt ID: Q80Z29

UniProt Link: www.uniprot.org/uniprotkb/Q80Z29/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 491 AA

Molecular Weight: 55 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MNAAAEAEFNILLATDSYKVTHYKQYPPNTSKVYSYFECREKKTENSKVRKVKYEETVIFYGLQYILNK
YLKGVVTKKEIKQEAKEVYREHFQDDVFNERGWNYLEKYDGHLPKAVPEGSVIPRGNVLTFTVEN
TDPECYWLTNWITILVQSWYPITVATNSREQKKILAKYLLETSGNLDGLEYKLHDFGYRGVSSQETA
GIGASAHLVNFKGTDTVAGIALIKKYYGTDKDPVPGYSVPAAEHSTITAWGKDHEKDAFEHIVTQFSSV
PVSVDSDSYDIYNACEKIWGEDLRHLIVSRSTEAPLIIRPD SGNPLD TVLKVLDILGKKFPVSENSKGY
KLLPPYLRVIQGDGVDINTLQEIVEGMKQKKWSIENVSFGSGGALLQKLTRDLLNCSFKCSYVVTNGL
GVNVFKDPVADPNKRSKGRLSLHRT PAGTFVTLEEGKGDLEEYGHDLLHTVFKNGKVTKSYSFDE
VRKNAQLNMEQDVAPH

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Nicotinamide phosphoribosyltransferase (NAMPTase) (Nampt) (EC 2.4.2.12) (Pre-B-cell colony-enhancing factor 1 homolog) (PBEF) (Visfatin) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein 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.

Subcellular Localization: Nucleus . Cytoplasm . Secreted . Note=Under non-inflammatory conditions, visfatin predominantly exhibits a granular pattern within the nucleus. Secreted by endothelial cells upon IL-1 β stimulation. Abundantly secreted in milk, reaching 100-fold higher concentrations compared to maternal serum.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.