



NAMPT (Nicotinamide Phosphoribosyltransferase)
Product Data Sheet
For Research Use Only, Not for use in diagnostic procedures

NAMPT

(Nicotinamide Phosphoribosyltransferase)

Human, recombinant protein expressed in *E. coli*, Active

Cat# CY-E1251

Amount: 100µg (1.5 µg/µl)
Lot:
Specific Activity: >1 unit/µg

Introduction:

Nicotinamide phosphoribosyltransferase (NAMPT), also known as pre-B-cell colony-enhancing factor, is the rate-limiting enzyme that converts nicotinamide to nicotinamide mononucleotide (NMN) from nicotinamide in the salvage pathway of NAD biosynthesis in mammals. Nicotinamide mononucleotide adenylyltransferase 1 converts NMN to NAD. The expression of NAMPT is upregulated during activation of immune cells such as monocytes, macrophages, dendritic cells, T and B cells, as well as in amniotic epithelial cells upon stimulation with several inflammatory cytokines. NAMPT-specific inhibitor, FK866 was found to deplete intracellular NAD content, resulting in apoptotic cell death in many cancer cell lines without any DNA damaging effect.

Product Description:

Human NAMPT (nicotinamide phosphoribosyltransferase) containing an N-terminal His-tag, expressed in *E. coli*. and purified by nickel chelating agarose chromatography.

Gene Information:

The gene accession number is NM_005746.

Gene Aliases:

pre-B-cell colony enhancing factor 1 (PBEF), Visfatin

Formulation:

Recombinant NAMPT is supplied frozen in a buffer containing 20 mM Hepes-KOH, pH 7.5, 1 mM DTT, 50 mM NaCl and 50% glycerol. Use a same buffer for dilution when needed.



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Molecular Weight: 56 kDa

Mw (kDa)

97 —

66 —

45 —

31 —

21.5 —

Coomassie blue stain

Recombinant NAMPT demonstrates approximately 56 kDa band by SDS-PAGE analysis.

Storage:

Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, AVOID REPEATED HANDLING AND MULTIPLE FREEZE/THAW CYCLES.

Stability:

Unopened vial at -70 °C, for 1 year after delivery.

Unit Definitions:

One unit is defined as the amount of nicotinamide phosphoribosyltransferase required producing 1 μmol of NAD from nicotinamide and phosphoribosyl pyrophosphate (PRPP) in conjunction with excess amount of nicotinamide mononucleotide adenylyl transferase (NMNAT1) per minute at 30°C. Specific Activity will vary among production lots.

Assay condition:

Assay activity of NAMPT in a 100 μL reaction containing 20 mM Tris HCl (pH 8.0), 0.5 mM nicotinamide, 0.5 mM phosphoribosyl pyrophosphate (PRPP), 2 mM ATP, 12 mM MgCl₂, 1 mM DTT, 200 g/mL BSA, 1.5 % ethanol and 2 μg of alcohol dehydrogenase. Start the reaction by adding 10 μL of the NAMPT enzyme (100 ng/μL) Incubate at 30°C. Read fluorescence intensity for 60 to 90 minutes at 2.5 to 5 minute intervals using microtiter plate fluorometer with excitation at 340 nm and emission at 460 nm. Measure and calculate the rate of reaction while the reaction velocity remains constant.



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References:

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Related Products:

- *CycLex NAMPT Colorimetric Assay Kit: Cat# CY-1251
- *CycLex NMNAT Colorimetric Assay kit: Cat# CY-1252
- *NAMPT (Nicotinamide Phosphoribosyltransferase): Cat# CY-E1251
- *NMNAT1 (Nicotinamide Mononucleotide Adenylyltransferase 1): Cat# CY-E1252
- *CycLex SIRT1/Sir2 Deacetylase Fluorometric Assay Kit: Cat# CY-1151
- *CycLex SIRT2 Deacetylase Fluorometric Assay Kit: Cat# CY-1152
- *CycLex SIRT3 Deacetylase Fluorometric Assay Kit: Cat# CY-1153
- *CycLex SIRT6 Deacetylase Fluorometric Assay Kit: Cat# CY-1156
- *NAD(+)-Dependent Deacetylase SIRT1: Cat# CY-E1151
- *NAD(+)-Dependent Deacetylase SIRT2: Cat# CY-E1152
- *NAD(+)-Dependent Deacetylase SIRT3: Cat# CY-E1153
- *NAD(+)-Dependent Deacetylase SIRT6: Cat# CY-E1156

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