

Product Name	: β -Nicotinamide mononucleotide
Synonyms	: β -NM
Cat No.	: M19547
CAS Number	: 1094-61-7
Molecular Formula	: C ₁₁ H ₁₅ N ₂ O ₈ P
Formula Weight	: 334.22
Chemical Name	: ((2R,3S,4R,5R)-5-(3-carbamoylpyridin-1-ium-1-yl)-3,4-dihydroxytetrahydrofuran-2-yl)methyl hydrogen phosphate
Description	<p>Nicotinamide ribotide (NMN) is an important intermediate metabolite in the nicotinate and nicotinamide metabolism pathway. Mammals predominantly use nicotinamide rather than nicotinic acid as a precursor for NAD biosynthesis. Instead of the deamidation to nicotinic acid, nicotinamide is directly converted to NMN by nicotinamide phosphoribosyltransferase (NAMPT EC 2.4.2.12). The enzyme nicotinamide mononucleotide adenylyltransferase (NMNAT EC 2.7.7.1) which is a member of the nucleotidyltransferase alpha/beta-phosphodiesterase superfamily catalyzes the reaction NMN + ATP \rightleftharpoons Nicotinamide adenine dinucleotide (NAD) + PPi representing the final step in the biosynthesis of NAD. NAD is a molecule that plays a fundamental role as a cofactor in cellular redox reactions. Thus NMN is an important metabolite for the maintenance of normal NAD biosynthesis. Circulating NMN levels may play an important role in regulating cell function in physiological and pathophysiological conditions.</p>
Pathway	: Others
Target	: Other Targets
Receptor	: Others
Solubility	: H ₂ O: 83.33 mg/mL (249.33 mM; Need ultrasonic)
SMILES	: <chem>NC(=O)c1ccc[n+](c1)[C@@H]1O[C@H](COP(O)([O-])=O)[C@@H](O)[C@H]1O</chem>
Storage	: (-20°C)
Stability	: ≥ 2 years
Reference	:

1. Ohdoi C et al. Chemical diagnosis of Lesch-Nyhan syndrome using gas chromatography-mass spectrometry detection. J Chromatogr B Analyt Technol Biomed Life Sci. 2003 Jul 15; 792(1):123-30.