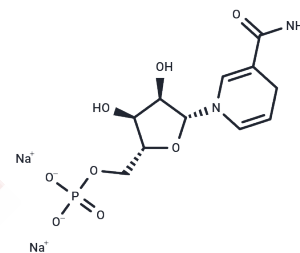


β -Nicotinamide mononucleotide, reduced form disodium

Chemical Properties

CAS No. :	108347-85-9
Formula:	C ₁₁ H ₁₅ N ₂ Na ₂ O ₈ P
Molecular Weight:	380.20
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	β -Nicotinamide mononucleotide, reduced form disodium is the reduced form of β -nicotinamide mononucleotide with oral bioavailability. It significantly increases cellular NAD ⁺ and NADH levels, inhibits glycolysis, the tricarboxylic acid cycle, and cell growth, and its efficacy depends on nicotinamide mononucleotide adenylyltransferase
Targets(IC50)	Endogenous Metabolite
In vitro	<p>Methods: HepG2 cells were treated with β-Nicotinamide mononucleotide, reduced form disodium, reduced form (NMNH) disodium; 100 μM was used for 12 h to detect NAD⁺ and metabolite levels, and 250-1000 μM was used for 12-72 h to detect cell growth and cell cycle.</p> <p>Results:</p> <p>1 β-Nicotinamide mononucleotide, reduced form disodium, reduced form (NMNH) disodium (100 μM, 12 h) could significantly increase the intracellular NAD⁺ level in HepG2 cells and decrease the contents of glycolysis and tricarboxylic acid cycle intermediates [1].</p> <p>2 β-Nicotinamide mononucleotide, reduced form disodium, reduced form (NMNH) disodium (250-1000 μM, 12-72 h) could inhibit the proliferation of HepG2 cells and induce cell cycle arrest.</p>
In vivo	<p>Methods: Male mice were given a single administration of β-Nicotinamide mononucleotide, reduced form disodium, reduced form (NMNH) disodium: 340 mg/kg by intraperitoneal injection or intragastric administration, and 250 mg/kg by intraperitoneal injection, to detect NAD⁺ levels in various tissues.</p> <p>Results:</p> <p>1 β-Nicotinamide mononucleotide, reduced form disodium, reduced form (NMNH) disodium (340 mg/kg, single intraperitoneal injection / intragastric administration) could increase the liver NAD⁺ level in male mice [1].</p> <p>2 β-Nicotinamide mononucleotide, reduced form disodium, reduced form (NMNH) disodium (250 mg/kg, single intraperitoneal injection) could increase the NAD⁺ levels in tissues such as liver, kidney, brain, muscle and whole blood of C57BL/6J mice by 2-5 times [2].</p>

Solubility Information

A DRUG SCREENING EXPERT

Solubility	H2O: 80 mg/mL (210.42 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6302 mL	13.151 mL	26.3019 mL
5 mM	0.526 mL	2.6302 mL	5.2604 mL
10 mM	0.263 mL	1.3151 mL	2.6302 mL
50 mM	0.0526 mL	0.263 mL	0.526 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Liu Y, et al. Reduced Nicotinamide Mononucleotide (NMNH) Potently Enhances NAD⁺ and Suppresses Glycolysis, the TCA Cycle, and Cell Growth. *J Proteome Res.* 2021 May 7;20(5):2596-2606.

Zapata-Pérez R, et al. Reduced nicotinamide mononucleotide is a new and potent NAD⁺ precursor in mammalian cells and mice. *FASEB J.* 2021 Apr;35(4):e21456.

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