

Product Name: Nicotinamide Riboside

Catalog No.: 6018

Batch No.: 3

CAS Number: 23111-00-4

IUPAC Name: 3-(Aminocarbonyl)-1-β-D-ribofuranosylpyridinium chloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₅ClN₂O₅·¼H₂O

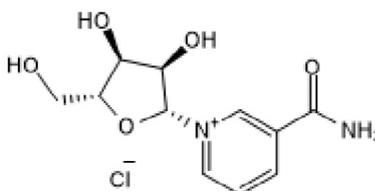
Batch Molecular Weight: 295.2

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM
water to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	44.76	5.29	9.49	12.01
Found	45.14	5.12	9.61	11.63

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Nicotinamide Riboside is an NAD⁺ precursor. It is a substrate for nicotinamide riboside kinases (NRK1/2). Nicotinamide Riboside shows neuroprotective effects in a mouse model of type 2 diabetes and improves mitochondrial function in muscle stem cells in aged mice. The compound also corrects non-alcoholic fatty liver disease phenotype induced by NAD⁺ deficiency or high-fat diet in mice. Orally bioavailable.

Physical and Chemical Properties:

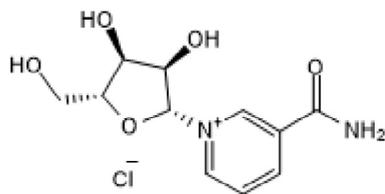
Batch Molecular Formula: C₁₁H₁₅ClN₂O₅·½H₂O

Batch Molecular Weight: 295.2

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Trammell et al (2016) Nicotinamide riboside opposes type 2 diabetes and neuropathy in mice. *Sci.Rep.* **6**. PMID: 27230286.

Zhang et al (2016) NAD⁺ repletion improves mitochondrial and stem cell function and enhances life span in mice. *Science* **352** 1436. PMID: 27127236.

Zhou et al (2016) Hepatic NAD(+) deficiency as a therapeutic target for non-alcoholic fatty liver disease in ageing. *Br.J.Pharmacol.* **173** 2352. PMID: 27174364.

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