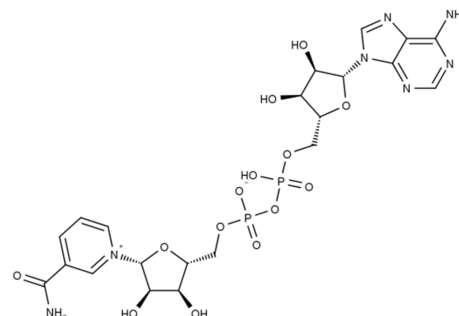




NAD⁺, free acid

Catalog No: 16110
Lot No: XXXXX
Cas No: 53-84-9
Formula: C₂₁H₂₇N₇O₁₄P₂
MW: 663.43
Supplied as: solid
Stability: store at -20°C



Background

Nicotinamide adenine dinucleotide, abbreviated NAD⁺, is a coenzyme found in all living cells. The compound is a dinucleotide, since it consists of two nucleotides joined through their phosphate groups. One nucleotide contains an adenine base and the other nicotinamide. In metabolism, NAD⁺ is involved in redox reactions, carrying electrons from one reaction to another. The coenzyme is, therefore, found in two forms in cells: NAD⁺ is an oxidizing agent – it accepts electrons from other molecules and becomes reduced. This reaction forms NADH, which can then be used as a reducing agent to donate electrons. These electron transfer reactions are the main function of NAD⁺. However, it is also used in other cellular processes, the most notable one being a substrate of enzymes that add or remove chemical groups from proteins, in posttranslational modifications. Because of the importance of these functions, the enzymes involved in NAD⁺ metabolism are targets for drug discovery.

Tests

Appearance:

Appearance of solution:

Water content (K.F.):

Assay of NAD (enzym.): (abs. at 340 nm. ε = 6.300)

A₂₅₀/A₂₆₀

A₂₈₀/A₂₆₀

Specifications

almost white to faint yellowish

lyophilized powder

clear, colourless to faint yellowish

≤3.5%

≥97.5% (calc. on dry basis)

0.81 – 0.85

0.20 – 0.24

Usage

This product is offered by Biomol for research purposes only. Not for diagnostic purposes or human use. It may not be resold or used to manufacture commercial products without written approval of Biomol GmbH.