

NAD⁺

(β -Nicotinamide Adenine Dinucleotide, free acid, Oxidising agent, Enzyme targets for drug discovery)

Product Number: 1013

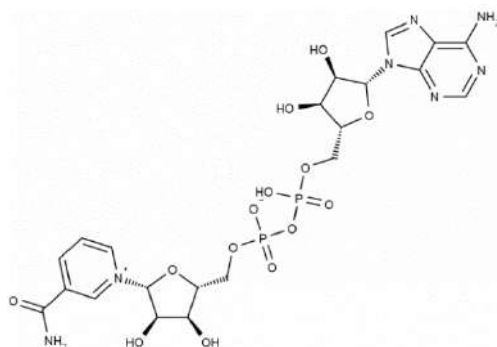
CAS Number: [53-84-9]

Storage Condition: Keep well closed at -20°C in a dark and dry place. Protect from light.

Description

β -Nicotinamide Adenine Dinucleotide (NAD⁺), free acid, oxidising agent, for biochemical assays. The coenzyme Nicotinamide Adenine Dinucleotide (NAD) is found in all living cells. In metabolism, NAD is engaged in redox reactions, carrying electrons from one reaction to another. Therefore, the cofactor is found in two forms in cells, as an oxidising agent NAD⁺ and as a reducing agent NADH.

Structural Formula NAD⁺ free acid



Specification

White to yellow lyophilizate, soluble

Molecular weight: 663.4g/mol

Molecular formula: C₂₁H₂₇N₇O₁₄P₄ (Hill Notation)

The oxidizing agent NAD⁺ 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 key function of NAD, although it is further used in other cellular processes, such as a substrate of enzymes in adding or removing chemical groups to or from, respectively, proteins, in posttranslational modifications.

Application

Due to the significance of these functions, the enzymes involved in NAD⁺ metabolism are appealing targets for drug discovery against a wide variety of diseases, including cancer, multiple sclerosis, neurodegeneration, and Huntington's disease.

Quality

For laboratory use only

Offering Sizes

Available in 1g, 5g, and 25g per packaging