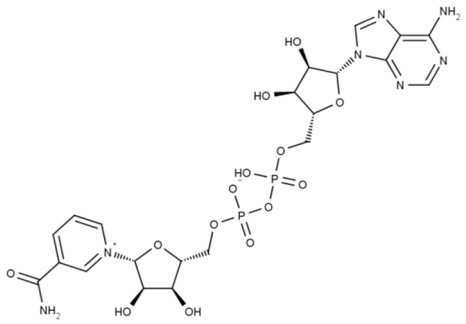
NAD+, free acid



Catalog No: 16110
Lot No: XXXXX
Cas No: 53-84-9
Formula: $C_{21}H_{27}N_7O_{14}P_2$
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	Specifications
Appearance:	almost white to faint yellowish lyophilized powder
Appearance of solution:	clear, colourless to faint yellowish
Purity (HPLC):	≥95%
ß-NAD (Enzym, 340 nm):	≥94.5%
Water content (K.F.):	≤3.5%
Absorbtion	
A_{250}/A_{260}	0.81 – 0.85
A_{280}/A_{260}	0.20 – 0.24

Usage

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