

SPECIFICATION SHEET

Product Name: Nicotinamide Adenine Dinucleotide Phosphate Reduced Form (NADPH) tetrasodium salt

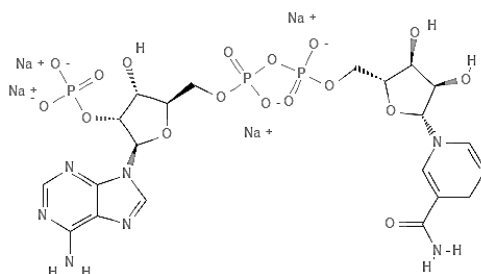
Catalog # NR01-C59

Product Description: Coenzyme Nicotinamide Adenine Dinucleotide Phosphate Reduced Form (NADP-Na) tetrasodium salt, CAS 2646-71-1, for catalytic reactions.

CAS: 2646-71-1

Storage and Stability: Product can be stored at dry and away from light, sealed and stored under cold storage -15°C ~-20°C.

Alternate Names	: β-nicotinamide adenine dinucleotide phosphate reduced form tetrasodium salt, reduced coenzyme II tetrasodium salt, β-NADPH tetrasodium salt
Appearance	: Yellow or pale yellow power
Molecular Weight	: 833.35 g/mol
Molecular Formula	: C ₂₁ H ₂₆ N ₇ Na ₄ O ₁₇ P ₃
Molecular Structure	



Purity Analysis	Purity:	≥93% (HPLC)
	Content:	≥90%
	Water Content:	≤8%

Scientific Background : Reduced nicotinamide adenine dinucleotide phosphate (NADPH) is an essential reducing agent and electron donor found in all forms of life (1). It serves as a cofactor in anabolic reactions driving the biosynthesis of all major cell components (i.e. lipid and nucleic acid synthesis) and the generation of reactive oxygen species (2). It plays an essential role in the activity of NADPH-dependent biosynthetic enzymes (3). Scientific applications of this product include enzymatic reactions and pharmacological studies. It can be used as a cofactor in various diagnostic tests (e.g., ammonia, urea, creatine).

- References**
1. Spaans SK, Weusthuis RA, van der Oost J, Kengen SW. NADPH-generating systems in bacteria and archaea. *Front Microbiol.* 2015 Jul 29;6:742. doi: 10.3389/fmicb.2015.00742. PMID: 26284036; PMCID: PMC4518329.
 2. Nakamura M, Bhatnagar A, Sadoshima J. Overview of pyridine nucleotides review series. *Circ Res.* 2012 Aug 17;111(5):604-10. doi: 10.1161/CIRCRESAHA.111.247924. PMID: 22904040; PMCID: PMC3523884.
 3. Papagianni M. Recent advances in engineering the central carbon metabolism of industrially important bacteria. *Microb Cell Fact.* 2012 Apr 30;11:50. doi: 10.1186/1475-2859-11-50. PMID: 22545791; PMCID: PMC3461431.
 4. National Center for Biotechnology Information (2022). PubChem Compound Summary for CID 52945042, Nadph tetrasodium salt. Retrieved October 24, 2022 from <https://pubchem.ncbi.nlm.nih.gov/compound/52945042>.

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