
Product Data Sheet

Product Name: NADPH tetracyclohexanamine

Cat. No.: GC33469

Chemical Properties

Cas. No. 100929-71-3

SMILES NC1=C2C(N([C@H]3[C@H](OP(O)(O)=O)[C@H](O)[C@@H](COP(OP(O)(OC[C@@H]4[C@@H](O)[C@@H](O)[C@H](N5C=C(C(N)=O)CC=C5)O4)=O)(O)=O)O3)C=N2)=NC=N1.NC6CCCCC6.NC7CCCCC7.NC8CCCCC8.NC9CCCCC9

Formula C₄₅H₈₂N₁₁O₁₇P₃ M.Wt 1142.12

Solubility Water : ≥ 27 mg/mL (23.64 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure NADPH tetracyclohexanamine**Background**

NADPH is the reduced form of the electron acceptor nicotinamide adenine dinucleotide phosphate (NADP⁺) and acts as an electron donor in various biological reactions. In plants, NADPH is produced by ferredoxin-NADP⁺ reductase in the last step of the electron chain during photosynthesis. In animals it is predominantly produced by the pentose phosphate pathway, but it is also generated by key mitochondrial enzymes. NADPH provides the reducing equivalents for biosynthetic reactions and the oxidation-reduction involved in protecting against the toxicity of reactive oxygen species.^{1,2,3} It is also used for the synthesis of lipids and cholesterol and during the process of fatty acid chain elongation.⁴

1.Sumimoto, H. Structure, regulation and evolution of Nox-family NADPH oxidases that produce reactive oxygen species FEBS J. 275(13)3249-3277(2008) 2.Sutherland, M.W., Nelson, J., Harrison, G., et al. Effects of t-butyl hydroperoxide on NADPH, glutathione, and the respiratory burst of rat alveolar macrophages Arch. Biochem. Biophys. 243(2)325-

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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331(1985) 3.Nauseef, W.M.Biological roles for the NOX family NADPH oxidasesJ. Biol. Chem.283(25)16961-16965(2008) 4.Tserng, K.Y., and Jin, S.J.NADPH-dependent reductive metabolism of cis-5 unsaturated fatty acids. A revised pathway for the β -oxidation of oleic acidJ. Biol. Chem.266(18)11614-11620(1990)

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