PRODUCT INFORMATION



NADH (sodium salt hydrate)

Item No. 16078

CAS Registry No.: 1949720-50-6

Formal Name: adenosine 5'-(trihydrogen

> diphosphate), $P' \rightarrow 5'$ -ester with 1,4-dihydro-1-β-D-ribofuranosyl-3-pyridinecarboxamide, disodium

salt, hydrate

Synonym: Nicotinamide adenine dinucleotide, H2N

reduced

MF: $C_{21}H_{27}N_7O_{14}P_2 \bullet 2Na [XH_2O]$

FW: 709.4 **Purity:** ≥95%

UV/Vis.: λ_{max} : 206, 260, 336 nm A crystalline solid Supplied as:

-20°C Storage: Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

NADH (sodium salt hydrate) is supplied as a crystalline solid. Aqueous solutions of NADH (sodium salt hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NADH (sodium salt hydrate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NADH is the reduced form of nicotinamide adenine dinucleotide (NAD) that can donate electrons as part of a reducing reaction. In that process, NADH becomes oxidized to produce NAD+ (Item No. 16077). A variety of enzymes use NADH plus H+ to reduce substrates, generating NAD+ as well as the reduced product.¹⁻³ For example, NADH:ubiquinone oxidoreductase accepts two electrons from NADH and passes them to ubiquinone (coenzyme Q) as part of the mitochondrial electron transport chain.³

References

- 1. Kim, M.S. and Kim, Y.J. Enzymatic properties of the membrane-bound NADH oxidase system in the aerobic respiratory chain of Bacillus cereus. J. Biochem. Mol. Biol. 37(6), 753-756 (2004).
- Godber, B.L.J., Doel, J.J., Sapkota, G.P., et al. Reduction of nitrite to nitric oxide catalyzed by xanthine oxidoreductase. J. Biol. Chem. 275(11), 7757-7763 (2000).
- Fato, R., Bergamini, C., Bortolus, M., et al. Differential effects of mitochondrial Complex I inhibitors on production of reactive oxygen species. Biochim. Biophys. Acta. 1787(5), 384-392 (2009).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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НО

• 2Na+ [XH2O]

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