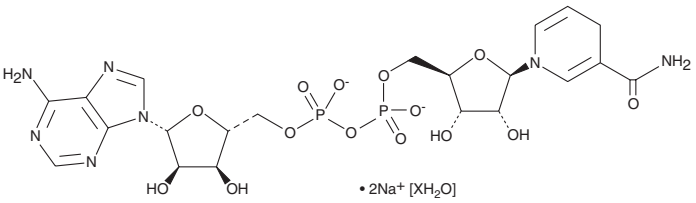
PRODUCT INFORMATION

NADH (sodium salt hydrate)

Item No. 16078

CAS Registry No.: 1949720-50-6
Formal Name: adenosine 5′-(trihydrogen diphosphate), P′→5′-ester with 1,4-dihydro-1-β-D-ribofuranosyl-3-pyridinecarboxamide, disodium salt, hydrate
Synonym: Nicotinamide adenine dinucleotide, 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
Supplied as: A crystalline solid
Storage: -20°C
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).
2. 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).
3. 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM