PRODUCT INFORMATION

ε-NAD$^+$ (sodium salt)

Item No. 38385

Formal Name: 3-(aminocarbonyl)-1-[5-O-[hydroxy(phosphonooxy)phosphinyl]-β-D-ribofuranosyl]-pyridinium, P′→5′-ester with 3-β-D-ribofuranosyl-3H-imidazo[2,1-i]purine, inner salt, monosodium salt

Synonyms: N^6-Ethenoadenine dinucleotide, β-Nicotinamide-1, ε-Nicotinamide adenine dinucleotide

MF: $C_{23}H_{26}N_7O_{14}P_2 \bullet Na$

FW: 709.4

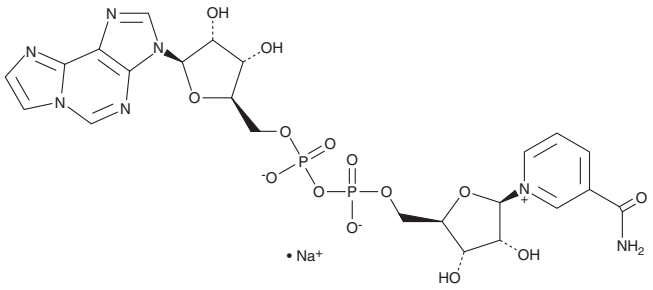
Purity: ≥95%

Ex./Em. Max: 295-300/410 nm

Supplied as: A solid

Storage: -80°C

Stability: ≥4 years



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

Laboratory Procedures

ε-NAD$^+$ (sodium salt) is supplied as a solid. A stock solution may be made by dissolving the ε-NAD$^+$ (sodium salt) in water. We do not recommend storing the aqueous solution for more than one day.

Description

ε-NAD$^+$ is a fluorescent probe for enzymes that use the signaling molecule and enzyme cofactor NAD$^+$ (Item No. 16077), such as glutamate dehydrogenase (GDH) or alcohol dehydrogenase (ADH).[1,2] Upon enzymatic cleavage, 5'-ε-AMP is released and its fluorescence can be used to quantify enzyme activity.[2] ε-NAD$^+$ displays an emission maximum of 410 nm upon excitation at 295-300 nm.[2]

References

1. Favilla, R. and Mazzini, A. The binding of 1,N^6-etheno-NAD to bovine liver glutamate dehydrogenase. *Biochim. Biophys. Acta* **788(1)**, 48-57 (1984).
2. Barrio, J.R., Secrist, J.A., 3rd., and Leonard, N.J. A fluorescent analog of nicotinamide adenine dinucleotide. *Proc. Natl. Acad. Sci. USA* **69(8)**, 2039-2042 (1972).

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