

**Product Name:** Biotin-NAD<sup>+</sup>

**Catalog No.:** 6573

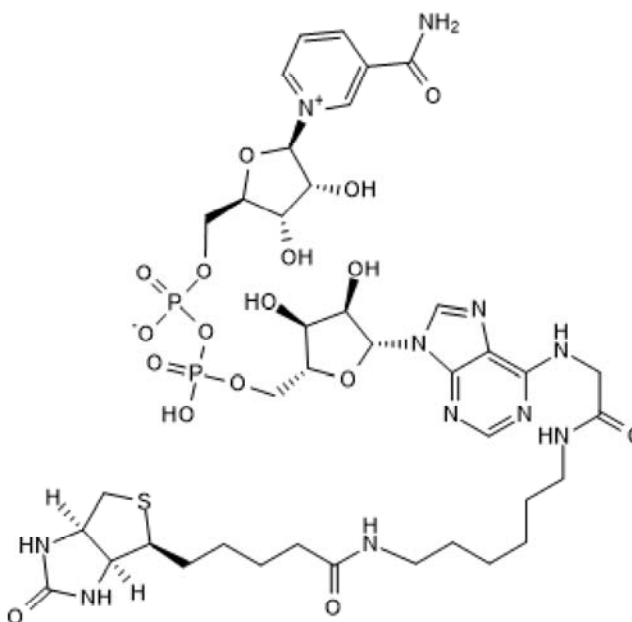
**Batch No.:** 1

CAS Number: 146385-37-7

IUPAC Name:  $\beta$ -Nicotinamide-*N*<sup>6</sup>-[2-[[6-[biotinyl]amino]hexyl]amino]-2-oxoethyl]adenine dinucleotide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>39</sub>H<sub>57</sub>N<sub>11</sub>O<sub>17</sub>P<sub>2</sub>S  
**Batch Molecular Weight:** 1045.95  
**Physical Appearance:** Colourless solution  
**Solubility:** Soluble in water (supplied pre-dissolved at a concentration of 0.25mM)  
**Storage:** Store at -80°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 88.1% purity  
**Mass Spectrum:** Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Provides a convenient non-isotopic alternative to radiolabeled NAD<sup>+</sup> for determination of IC<sub>50</sub> values for candidate PARP inhibitors and studies requiring this substrate. Biotinylated-NAD<sup>+</sup> allows an indirect measure of PARP activity when biotin incorporation is detected using a conjugated-streptavidin detection system. Acts as a substrate for ADP-ribosylation. Can be used to label and purify biotinyl-ADP ribosylated proteins. This product is a replacement for R&D Systems product 4670-500-01. 131  $\mu$ g is supplied as 500  $\mu$ l of a 0.25 mM solution in water. Please see product datasheet on www.tocris.com for full description.

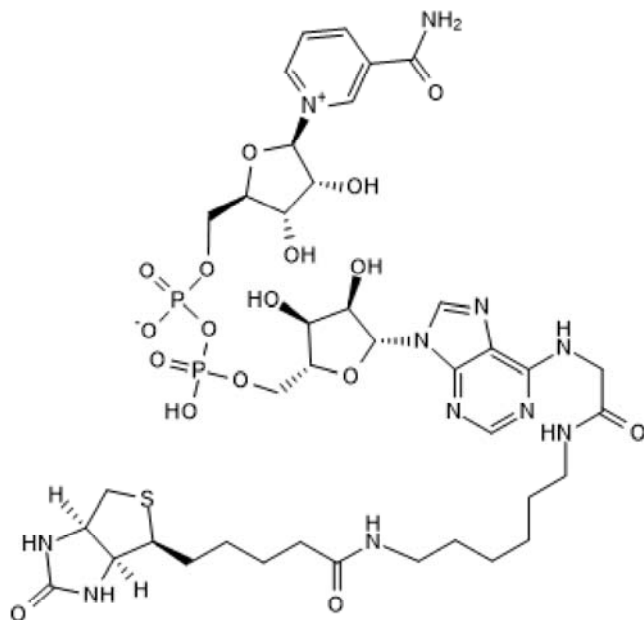
**Physical and Chemical Properties:**

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Batch Molecular Weight: 1045.95

Physical Appearance: Colourless solution

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**Storage:** Store at -80°C

**Solubility & Usage Info:**

Soluble in water (supplied pre-dissolved at a concentration of 0.25mM)

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Schuster et al** (2017) The Hsp90 machinery facilitates the transport of diphtheria toxin into human cells. *Sci.Rep.* **7** 613. PMID: 28377614.

**Yang et al** (2017) Ubiquitin Modification by the E3 Ligase/ADP-Ribosyltransferase Dtx3L/Parp9. *Mol. Cell* **66** 613. PMID: 28525742.

**Yang** (2013) Antitumor activity of a pyrrole-imidazole polyamide. *Proc.Natl.Acad.Sci.USA* **110** 1863. PMID: 23319609.

**Zhang et al** (1993) Purification of a nitric oxide-stimulated ADP-ribosylated protein using biotinylated beta-nicotinamide adenine dinucleotide. *Biochemistry* **32** 2228. PMID: 8443164.

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