

# Certificate of Analysis

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

**Catalog No.:** 6573

**Batch No.:** 6

**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

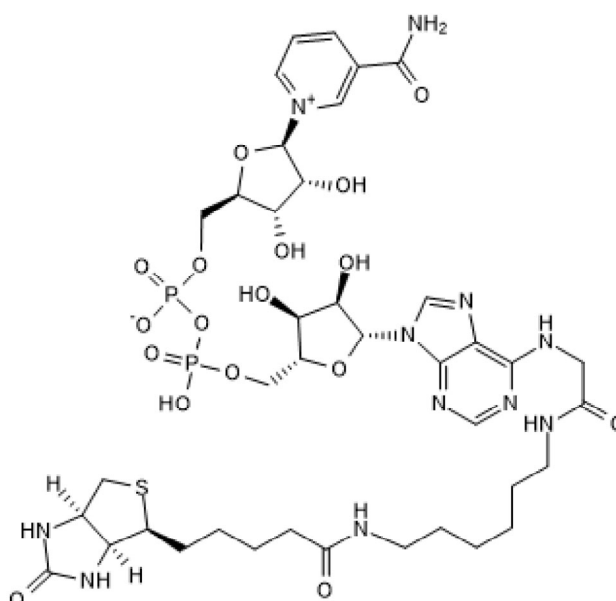
**Batch Molecular Weight:** 1045.95

**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 87.6% purity

**Mass Spectrum:** Consistent with structure

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

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

**Description:**

Biotin-NAD<sup>+</sup> is a 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 µg is supplied as 500 µl of a 0.25 mM solution in water. Please see product specific page on [www.tocris.com](http://www.tocris.com) for full description.

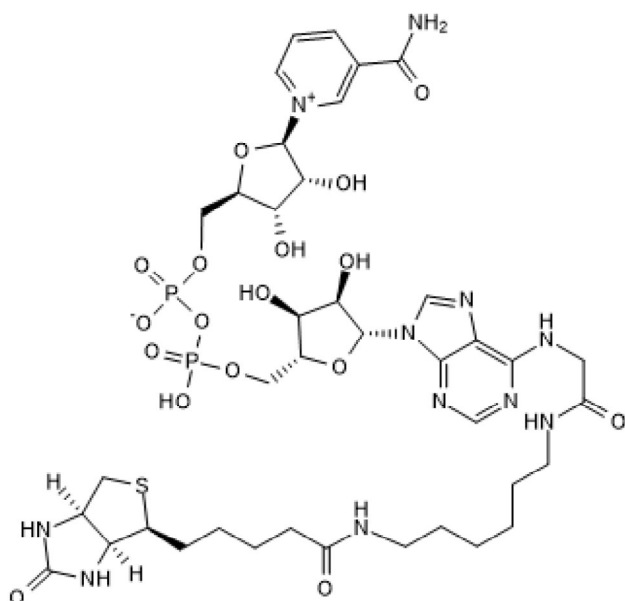
**Physical and Chemical Properties:**

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

**Batch Molecular Structure:**



**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. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**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.

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