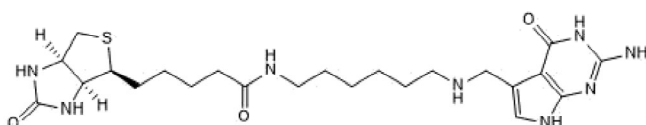


Product Name: preQ₁-biotin **Catalog No.:** 7804 **Batch No.:** 1
CAS Number: 2971850-25-4
IUPAC Name: N-(6-(((2-Amino-4-oxo-4,7-dihydro-3H-pyrrolo[2,3-d]pyrimidin-5-yl)methyl)amino)hexyl)-5-((3a*S*,4*S*,6a*R*)-2-oxohexahydro-1*H*-thieno[3,4-*d*]imidazol-4-yl)pentanamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₃₆N₈O₃S · 1½H₂O
Batch Molecular Weight: 531.67
Physical Appearance: White solid
Solubility: DMSO to 20 mM
 ethanol to 5 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 96.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.96	7.39	21.08
Found	51.72	7.05	20.53

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

Product Name: preQ₁-biotin

Catalog No.: 7804

1

CAS Number: 2971850-25-4

IUPAC Name: *N*-(6-(((2-Amino-4-oxo-4,7-dihydro-3*H*-pyrrolo[2,3-*d*]pyrimidin-5-yl)methyl)amino)hexyl)-5-((3*aS*,4*S*,6*aR*)-2-oxohexahydro-1*H*-thieno[3,4-*d*]imidazol-4-yl)pentanamide

Description:

preQ₁-biotin is a modified analog of the natural substrate prequeosine1 (preQ1) and is used for RNA-TAG (transglycosylation at guanosine) and DNA-TAG. preQ₁-biotin enables affinity tagging and pull-down of specific RNAs that have been modified selectively by *E. coli* tRNA guanine transglycosylase (TGT). preQ₁-biotin is incorporated site-specifically and covalently into RNAs containing a short harpin nucleotide recognition motif. The guanine in a UGU recognition element is exchanged with the preQ₁-biotin substrate. Plasmids for expression of the *E. coli* TGT enzyme (#138201) and for cloning an RNA of interest into a vector containing the recog... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

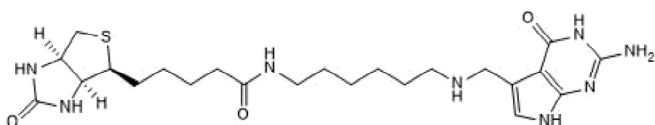
Batch Molecular Formula: C₂₃H₃₆N₈O₃S.1½H₂O

Batch Molecular Weight: 531.67

Physical Appearance: White solid

Minimum Purity: ≥95%

Batch Molecular Structure:



References:

Tota and Devaraj (2023) Site-specific covalent labeling of DNA substrates by an RNA transglycosylase. *J. Am. Chem. Soc.* **145** 8099. PMID: 36988146.

Busby et al (2020) Enzymatic RNA biotinylation for affinity purification and identification of RNA-protein interactions. *ACS Chem. Biol.* **15** 2247. PMID: 32706237.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 20 mM

ethanol to 5 mM

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.

Licensing Information:

Sold under license from The Regents of the University of California.

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