

Product Name: NHS-LC-Biotin

Catalog No.: 7301

Batch No.: 1

CAS Number: 72040-63-2

IUPAC Name: 6-[[5-[(3a*S*,4*S*,6a*R*)-Hexahydro-2-oxo-1*H*-thieno[3,4-*d*]imidazol-4-yl]-1-oxopentyl]amino]hexanoic acid 2,5-dioxo-1-pyrrolidinyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₃₀N₄O₆S.½H₂O

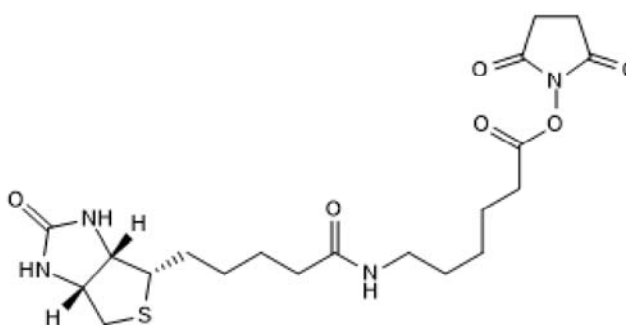
Batch Molecular Weight: 463.55

Physical Appearance: White solid

Solubility: DMSO to 100 mM
DMF to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 96.8% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.82	6.74	12.09
Found	51.6	6.73	12.01

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

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Description:

NHS-LC-Biotin is a membrane permeable amine reactive biotinylation reagent used to attach biotin to primary amines with a 6-atom chain (22.4 angstroms) linker. NHS-LC-Biotin is commonly used to label proteins and antibodies. Reactive in pH 7.0-9.0. Should be dissolved in DMSO (solubility = 100 mM) or DMF prior to further dilution in aqueous buffers.

Physical and Chemical Properties:

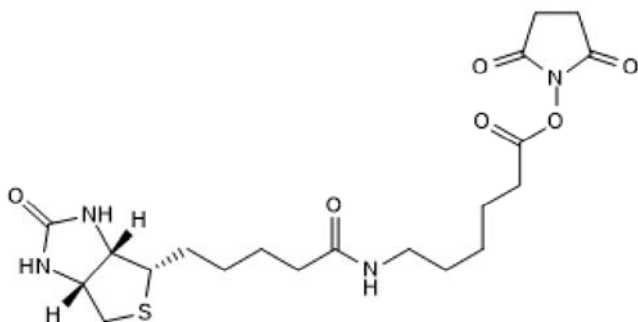
Batch Molecular Formula: C₂₀H₃₀N₄O₆S.½H₂O

Batch Molecular Weight: 463.55

Physical Appearance: White solid

Minimum Purity: ≥90%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

DMF to 100 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. 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:

Wang *et al* (2020) An array of 60,000 antibodies for proteome-scale antibody generation and target discovery. *Sci.Adv.* **6** (11) eaax2271. PMID: 32195335.

Kamperman *et al* (2019) Spatiotemporal material functionalization via competitive supramolecular complexation of avidin and biotin analogs. *Nat.Commun.* **10** (1) 4347. PMID: 31554812.

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