

Certificate of Analysis

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Product Name: Biocytin

Catalog No.: 3349

Batch No.: 10

CAS Number: 576-19-2

IUPAC Name: *N*⁶-[5-[(3*a*S,4*S*,6*a**R*)-Hexahydro-2-oxo-1*H*-thieno[3,4-*d*]imidazol-4-yl]-1-oxopentyl]-L-lysine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₂₈N₄O₄S

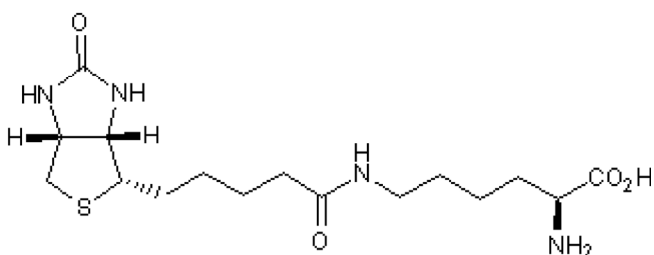
Batch Molecular Weight: 372.48

Physical Appearance: White solid

Solubility: water to 50 mM with gentle warming

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = +56.2 (Concentration = 1.05, Solvent = 0.1M NaOH)

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

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Description:

Biocytin is a versatile marker used in anterograde, retrograde and intracellular neuroanatomical investigations and in biotinidase assays. Displays high solubility in aqueous solutions and has a low molecular weight facilitating injection using micropipettes. Can be incorporated with a variety of avidin and streptavidin conjugates for detection by light, fluorescence or electron microscope.

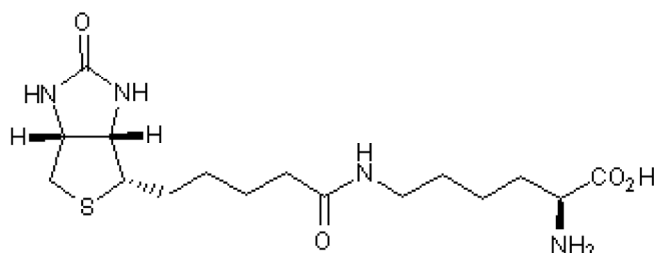
Physical and Chemical Properties:

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Physical Appearance: White solid

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Storage: Store at -20°C

Solubility & Usage Info:

water to 50 mM with gentle warming

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:

MacNeil and Gaul (2008) Biocytin wide-field bipolar cells in rabbit retina selectively contact blue cones. *J.Comp.Neurol.* **506** 6. PMID: 17990268.

Roth et al (2004) Morphology and axonal projection pattern of neurons in the telencephalon of the fire-bellied toad *Bombina orientalis*: an anterograde, retrograde and intracellular biocytin labelling study. *J.Comp.Neurol.* **478** 35. PMID: 15334648.

Kobbert et al (2000) Current concepts in neuroanatomical tracing. *Prog.Neurobiol.* **62** 327. PMID: 10856608.

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