

Biocytin

Chemical Properties

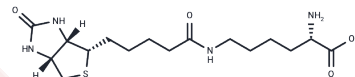
CAS No. : 576-19-2

Formula: C₁₆H₂₈N₄O₄S

Molecular Weight: 372.48

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Biocytin is a classical neuroanatomical tracer commonly used to map brain connectivity. Biocytin is a conjugate of D-biotin and L-lysine, where the carboxylate of D-biotin is coupled with the -amine of L-lysine via a secondary amide bond.
Targets(IC50)	Endogenous Metabolite
In vitro	Biocytin is used as a versatile marker in anterograde, retrograde and intracellular neuroanatomical investigations and in biotinidase assays. Biocytin wide-field bipolar cell is an ON blue cone bipolar cell in the rabbit retina and is homologous to the blue cone bipolar cells that have been previously described in primate, mouse, and ground squirrel retinas[2].

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble) H ₂ O: 11.8 mg/mL (31.68 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6847 mL	13.4235 mL	26.8471 mL
5 mM	0.5369 mL	2.6847 mL	5.3694 mL
10 mM	0.2685 mL	1.3424 mL	2.6847 mL
50 mM	0.0537 mL	0.2685 mL	0.5369 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Roth G, et al. Morphology and axonal projection pattern of neurons in the telencephalon of the fire-bellied toad *Bombina orientalis*: an anterograde, retrograde, and intracellular biocytin labeling study. *J Comp Neurol*. 2004 Oct 4;478(1):35-61.
- MacNeil MA, et al. Biocytin wide-field bipolar cells in rabbit retina selectively contact blue cones. *J Comp Neurol*. 2008 Jan 1;506(1):6-15.
- Mishra A, et al. Improved neuronal tract tracing with stable biocytin-derived neuroimaging agents. *ACS Chem Neurosci*. 2010 Feb 17;1(2):129-38.

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