

# PRODUCT INFORMATION



## Biocytin

Item No. 16751

CAS Registry No.: 576-19-2

Formal Name: N<sup>6</sup>-[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]-L-lysine

Synonym: ε-N-(d-Biotinyl)-L-lysine

MF: C<sub>16</sub>H<sub>28</sub>N<sub>4</sub>O<sub>4</sub>S

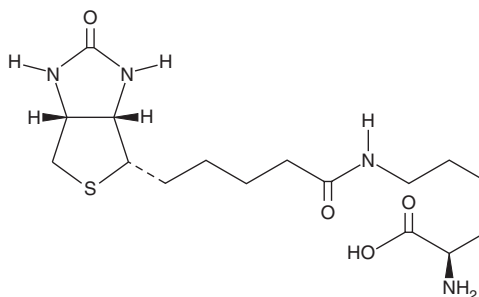
FW: 372.5

Purity: ≥98%

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

## Laboratory Procedures

Biocytin is supplied as a crystalline solid. Aqueous solutions of biocytin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of biocytin in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

## Description

Biocytin is a conjugate of biotin and lysine known formally as ε-N-(d-biotinyl)-L-lysine. The addition of lysine to biotin increases the chain length extending from biotin, allowing the synthesis of medium-chain reagents. It also provides terminal carboxyl and amino groups for derivatization or conjugation to proteins and other molecules. Covalent linking reactions typically involve carbodiimide or NHS-ester crosslinking chemistries. Biocytin is also used as an anterograde, retrograde, or intracellular neuroanatomical tracer that is fixable with aldehyde-based fixatives.<sup>1-3</sup> For this and other applications, biocytin is detected with avidin or streptavidin probes.

## References

1. MacNeil, M.A. and Gaul, P.A. Biocytin wide-field bipolar cells in rabbit retina selectively contact blue cones. *J. Comp. Neurol.* **506**(1), 6-15 (2008).
2. Friauf, E., McConnell, S.K., and Shatz, C.J. Functional synaptic circuits in the subplate during fetal and early postnatal development of cat visual cortex. *J. Neurosci.* **10**(8), 2601-2613 (1990).
3. Bopp, R., Maçarico da Costa, N., Kampa, B.M., et al. Pyramidal cells make specific connections onto smooth (GABAergic) neurons in mouse visual cortex. *PLoS Biol.* **12**(8), 1-12 (2014).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/26/2022

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM