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DATASHEET

Biocytin

Product overview

Name	Biocytin
Cat No	HB5035
Description	Classical neuroanatomical tracer
Biological description	**Overview** Biocytin is a conjugate of biotin and lysine which is small and soluble. It is widely used in neuroanatomical research as a neuroanatomical tracer. **Uses and applications** Biocytin is taken up by neurons and rapidly transported in both anterograde and retrograde directions. It has high affinity for avidin and consequently, can be visualized by various avidin and streptavidin-conjugated markers for light, fluorescence or electron microscope detection. Biocytin has a short half-life and is degraded by biotinidase a few hours after application.
Biological action	Dyes & stains
Purity	>95% (NMR)

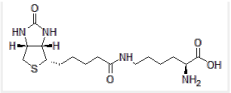
Images

Solubility & Handling

Storage instructions	-20°C
Solubility overview	Soluble in water (50 mM)
Important	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use

Chemical Data

Chemical name	N6-[5-[(3aS,4S,6aR)-Hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]-L-lysine
Molecular Weight	372.5
Chemical structure	



Molecular Formula	$C_{16}H_{28}N_4O_4S$
CAS Number	576-19-2
PubChem identifier	83814
SMILES	C1[C@H]2[C@@H]([C@@H](S1)CCCCC(=O)NCCCC[C@@H](C(=O)O)N)NC(=O)N2
InChi	InChI=1S/C16H28N4O4S/c17-10(15(22)23)5-3-4-8-18-13(21)7-2-1-6-12-14-11(9-25-12)19-16(24)20-14/h10-12,14H,1-9,17H2,(H,18,21)(H,22,23)(H2,19,20,24)/t10-,11-,12-,14-/m0/s1
InChiKey	BAQMYDQNMFBZNA-MNXVOIDGSA-N
MDL number	MFCD00077319

References

Biocytin-labelling and its impact on late 20th century studies of cortical circuitry

Thomson AM *et al* (2011) Brain Res Rev 66(1-2)
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Neuroanatomical labeling with biocytin: a review

McDonald AJ (1992) Neuroreport 3(10)
PubMedID 1384763

Immunostaining of Biocytin-filled and Processed Sections for Neurochemical Markers

Swietek B *et al* (2016) J Vis Exp 31
PubMedID 28117774