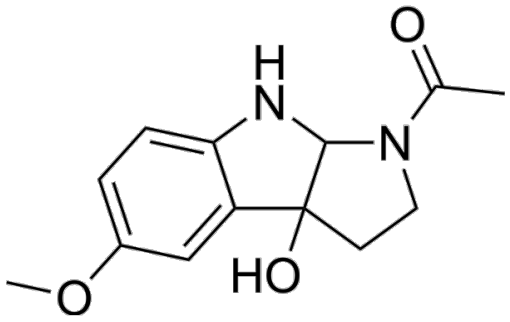
Product Data Sheet

Product Name: Melatonin-OH
Cat. No.: GC79599

Chemical Properties

Cas. No.	67199-08-0		
Formula	$C_{13}H_{16}N_2O_3$	M.Wt	248.28
Solubility	DMSO: ≥ 100 mg/mL (402.77 mM)	Storage	Store at -20°C, protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Melatonin -OH is an oxidative Melatonin metabolite with free radical-scavenging activity. Melatonin -OH forms via Melatonin ’s reaction with hydroxyl radicals (·OH). Melatonin -OH forms via Melatonin ’s reaction with peroxynitrous acid or its activated form ONOOH [1] [2] [3].

In Vitro, Melatonin-OH (Cyclic 3-hydroxymelatonin) (3COHM) (5 μg/mL) can be accurately detected and quantified via optimized HPLC, with a measured concentration of 4.93 μg/mL for a 5 μg/mL standard solution and a retention time of 8.1 min with excellent peak resolution[1]. Cyclic 3-hydroxymelatonin (3COHM) (5 μg/mL) can be detected and quantified via optimized MEKC, with a

measured concentration of 4.70 µg/mL for a 5 µg/mL standard solution, though results differ significantly from HPLC measurements[1].

References:

[1]. Hevia D, et al. Development and validation of new methods for the determination of melatonin and its oxidative metabolites by high performance liquid chromatography and capillary electrophoresis, using multivariate optimization. J Chromatogr A. 2010;1217(8):1368-1374.
[2]. Galano A, et al. Melatonin as a natural ally against oxidative stress: a physicochemical examination. J Pineal Res. 2011;51(1):1-16.
[3]. Reiter RJ, et al. Free radical-mediated molecular damage. Mechanisms for the protective actions of melatonin in the central nervous system. Ann N Y Acad Sci. 2001 Jun;939:200-15.