Data Sheet (Cat.No.T22530)

TargetMol

6-Chloromelatonin

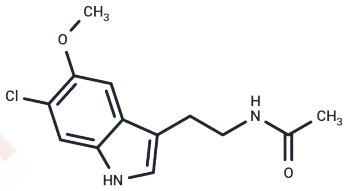
Chemical Properties

CAS No. : 63762-74-3

Formula: C13H15ClN2O2

Molecular Weight: 266.72

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	6-Chloromelatonin is a potent melatonin receptor agonist, a 5-methoxyindole compound that competes for presynaptic melatonin receptor sites in the rabbit retina, inhibiting the calcium-dependent release of [3H]dopamine with higher metabolic stability than melatonin. Chloromelatonin competitively binds to [3H]melatonin at MT2 receptors (pKi=9.77) and may be used to study insomnia and sleep disorders associated with depression.
Targets(IC50)	Melatonin Receptor,Dopamine Receptor
In vitro	6-Chloromelatonin (10 pM, 1 nM, 100 nM, 10 μM; 72 h) inhibits forskolin-stimulated hCG-beta secretion in JEG-3 and BeWo cells in a dose-dependent manner but had no effect on basal human chorionic gonadotrophin (hCG-beta) levels.[4] 6-Chloromelatonin competes for [3H]-melatonin binding sites in human platelet (Ki=11.4 nM).[3]
In vivo	6-Chloromelatonin (0.5 mg/kg; injection; rats) on the day after the phase shift has markedly higher excretion rates of 6-Sulphatoxymelatonin compared with controls.[5]

Solubility Information

Solubility	DMSO: 90 mg/mL (337.43 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7493 mL	18.7463 mL	37.4925 mL
5 mM	0.7499 mL	3.7493 mL	7.4985 mL
10 mM	0.3749 mL	1.8746 mL	3.7493 mL
50 mM	0.075 mL	0.3749 mL	0.7499 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

Browning C, et al. Pharmacological characterization of human recombinant melatonin mt(1) and MT(2) receptors. Br J Pharmacol. 2000;129(5):877-886.
Clemens JA, et al. Inhibition of luteinizing hormone release and ovulation by 6-chloro- and 6-fluoromelatonin. Neuroendocrinology. 1980;30(2):83-87.
Vacas MI, et al. Binding sites for [3H]-melatonin in human platelets. J Pineal Res. 1992;13(2):60-65.
Lanoix D, et al. Expression of melatoninergic receptors in human placental choriocarcinoma cell lines. Hum Reprod. 2006;21(8):1981-1989.
Kennaway DJ, et al. A melatonin agonist and N-acetyl-N2-formyl-5-methoxykynurenamine accelerate the reentrainment of the melatonin rhythm following a phase advance of the light-dark cycle. Brain Res. 1989;495(2):349-354.