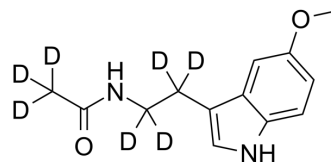


Melatonin-d₇

Cat. No.:	HY-B0075S2		
CAS No.:	615251-68-8		
Molecular Formula:	C ₁₃ H ₉ D ₇ N ₂ O ₂		
Molecular Weight:	239.32		
Target:	Melatonin Receptor; Apoptosis; Autophagy; Mitophagy; Endogenous Metabolite		
Pathway:	GPCR/G Protein; Neuronal Signaling; Apoptosis; Autophagy; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Melatonin-d ₇ is the deuterium labeled Melatonin. Melatonin is a hormone made by the pineal gland that can activate melatonin receptor. Melatonin plays a role in sleep and possesses important antioxidative and anti-inflammatory properties[1][2][3]. Melatonin is a novel selective ATF-6 inhibitor and induces human hepatoma cell apoptosis through COX-2 downregulation[4]. Melatonin attenuates palmitic acid-induced (HY-N0830) mouse granulosa cells apoptosis via endoplasmic reticulum stress[5].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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- [2]. Kilic U, et al. Particular phosphorylation of PI3K/Akt on Thr308 via PDK-1 and PTEN mediates melatonin's neuroprotective activity after focal cerebral ischemia in mice. *Redox Biol.* 2017 Apr 5;12:657-665
- [3]. Hu C, et al. Neuroprotective effect of melatonin on soluble Aβ₁₋₄₂-induced cortical neurodegeneration via Reelin-Dab1 signaling pathway. *Neurol Res.* 2017 Apr 7:1-1
- [4]. Zhi Chen, et al. Melatonin attenuates palmitic acid-induced mouse granulosa cells apoptosis via endoplasmic reticulum stress. *J Ovarian Res.* 2019 May 10;12(1):43.
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- [6]. Rahim I, et al. Melatonin administration to wild-type mice and non-treated NLRP3 mutant mice share similar inhibition of the inflammatory response during sepsis. *J Pineal Res.* 2017 Mar 31

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA