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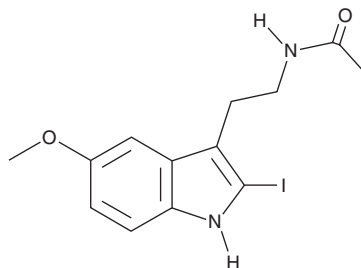
PRODUCT INFORMATION



2-Iodomelatonin

Item No. 19711

CAS Registry No.: 93515-00-5
Formal Name: N-[2-(2-iodo-5-methoxy-1H-indol-3-yl)ethyl]-acetamide
MF: C₁₃H₁₅IN₂O₂
FW: 358.2
Purity: ≥98%
UV/Vis.: λ_{max}: 214, 279 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥5 years



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

Laboratory Procedures

2-Iodomelatonin is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-iodomelatonin in the solvent of choice. 2-Iodomelatonin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 2-iodomelatonin in ethanol is approximately 20 mg/ml and 30 mg/ml in DMSO and DMF.

2-Iodomelatonin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-iodomelatonin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2-Iodomelatonin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-Iodomelatonin is a potent agonist of melatonin receptor 1 (MT₁; K_i = 28 pM) that is 5-fold selective for MT₁ over MT₂.^{1,2} It inhibits forskolin-stimulated cAMP production in CHO cells expressing human MT₁ 30-fold more potently than melatonin (Item No. 14427) with an EC₅₀ value of 11 pM. 2-Iodomelatonin has been used to characterize the role of MT₁ in melatonin-mediated signaling.^{3,4}

References

1. Dubocovich, M.L., Masana, M.I., Iacob, S., *et al.* Melatonin receptor antagonists that differentiate between the human Mel_{1a} and Mel_{1b} recombinant subtypes are used to assess the pharmacological profile of the rabbit retina ML₁ presynaptic heteroreceptor. *Naunyn-Schmiedeberg's Arch. Pharmacol.* **355**(3), 365-375 (1997).
2. Browning, C., Beresford, I., Fraser, N., *et al.* Pharmacological characterization of human recombinant melatonin mt₁ and MT₂ receptors. *Br. J. Pharmacol.* **129**(5), 877-886 (2000).
3. Cecon, E., Chen, M., Marçola, M., *et al.* Amyloid β peptide directly impairs pineal gland melatonin synthesis and melatonin receptor signaling through the ERK pathway. *FASEB J.* **29**(6), 2566-2582 (2015).
4. Adamah-Biassi, E.B., Zhang, Y., Jung, H., *et al.* Distribution of MT₁ melatonin receptor promoter-driven RFP expression in the brains of BAC C3H/HeN transgenic mice. *J. Histochem. Cytochem.* **62**(1), 70-84 (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

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