

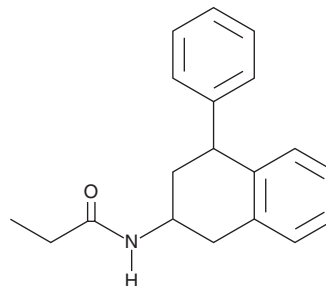
# PRODUCT INFORMATION



## 4-P-PDOT

Item No. 17411

**CAS Registry No.:** 134865-74-0  
**Formal Name:** N-(1,2,3,4-tetrahydro-4-phenyl-2-naphthalenyl)-propanamide  
**Synonyms:** AH 024, *cis*-4-phenyl-2-Propionamidotetralin  
**MF:** C<sub>19</sub>H<sub>21</sub>NO  
**FW:** 279.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 262 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

4-P-PDOT is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-P-PDOT in the solvent of choice, which should be purged with an inert gas. 4-P-PDOT is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 4-P-PDOT in these solvents is approximately 5, 15, and 30 mg/ml, respectively.

4-P-PDOT is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-P-PDOT should first be dissolved in DMF and then diluted with the aqueous buffer of choice. 4-P-PDOT has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

4-P-PDOT is an antagonist of the melatonin 2 (MT<sub>2</sub>) receptor (pK<sub>i</sub> = 8.37) that displays 60-fold selectivity for MT<sub>2</sub> over MT<sub>1</sub>.<sup>1,2</sup> 4-P-PDOT is used in cells, explants, and animals to elucidate the role of MT<sub>2</sub> in melatonin-mediated signaling.<sup>3,4</sup>

### References

1. Browning, C., Beresford, I., Fraser, N., *et al.* Pharmacological characterization of human recombinant melatonin MT<sub>1</sub> and MT<sub>2</sub> receptors. *Br. J. Pharmacol.* **129(5)**, 877-886 (2000).
2. Dubocovich, M.L., Masana, M.I., Iacob, S., *et al.* Melatonin receptor antagonists that differentiate between the human Mel<sub>1a</sub> and Mel<sub>1b</sub> recombinant subtypes are used to assess the pharmacological profile of the rabbit retina ML<sub>1</sub> presynaptic heteroreceptor. *Naunyn Schmiedebergs Arch. Pharmacol.* **355(3)**, 365-375 (1997).
3. Juszczak, M., Wolak, M., Bojanowska, E., *et al.* The role of melatonin membrane receptors in melatonin-dependent oxytocin secretion from the rat hypothalamo-neurohypophysial system - an *in vitro* and *in vivo* approach. *Endokrynol. Pol.* **67(5)**, 507-514 (2016).
4. Shin, E.-J., Chung, Y.-H., TLe, H.-L.T., *et al.* Melatonin attenuates memory impairment induced by Klotho gene deficiency via interactive signaling between MT<sub>2</sub> receptor, ERK, and Nrf2-related antioxidant potential. *Int. J. Neuropsychopharmacol.* **18(6)** (2015).

#### 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.

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