

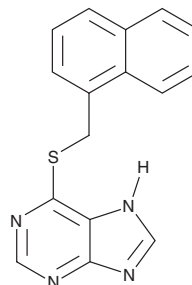
PRODUCT INFORMATION



PU 02

Item No. 14312

CAS Registry No.: 313984-77-9
Formal Name: 6-[(1-naphthalenylmethyl)thio]-9H-purine
MF: C₁₆H₁₂N₄S
FW: 292.4
Purity: ≥98%
UV/Vis.: λ_{max}: 224, 294 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

PU 02 is supplied as a crystalline solid. A stock solution may be made by dissolving the PU 02 in the solvent of choice, which should be purged with an inert gas. PU 02 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PU 02 in these solvents is approximately 10 mg/ml.

PU 02 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PU 02 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PU 02 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PU 02 is an antagonist of the serotonin (5-HT) receptor subtype 5-HT₃ with IC₅₀ values ranging from 0.36 to 1.3 μM for human 5-HT_{3A}, 5-HT_{3AB}, 5-HT_{3AC}, and 5-HT_{3AE} in a FLIPR membrane potential assay using HEK293 cells expressing human recombinant receptors.¹ It is selective for 5-HT₃ over other Cys-loop containing receptors with IC₅₀ values >100 μM for mouse, rat, and human nicotinic (nACh), human GABA_A, and human glycine (Gly) receptors. PU 02 inhibits currents induced by 5-HT (Item No. 14332) in COS-7 cells expressing human 5-HT_{3A} (IC₅₀ = 0.49 μM). PU 02 also reduces growth of HepG2 cells in a dose-dependent manner via induction of cell cycle arrest at the G₂/M phase and apoptosis.²

References

1. Trattnig, S.M., Harpsøe, K., Thygesen, S.B., *et al.* Discovery of a novel allosteric modulator of 5-HT₃ receptors: Inhibition and potentiation of Cys-loop receptor signaling through a conserved transmembrane intersubunit site. *J. Biol. Chem.* **287**(30), 25241-25254 (2012).
2. Yang, X.-G., Bao, Y.-L., Huang, Y.-X., *et al.* 6-[(1-naphthylmethyl)sulfanyl]-9H-purine induces G₂/M phase arrest and apoptosis in human hepatocellular carcinoma HepG2 cells. *Eur. J. Pharmacol.* **695**(1-3), 27-33 (2012).

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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