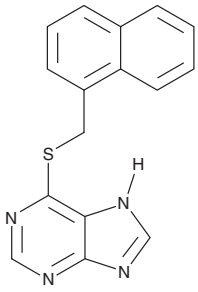
PRODUCT INFORMATION

PU 02

Item No. 14312



CAS Registry No.:	313984-77-9
Formal Name:	6-[(1-naphthalenylmethyl)thio]-9H-purine
MF:	$C_{16}H_{12}N_4S$
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-HT_3 with IC_{50} 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-HT_3 over other Cys-loop containing receptors with IC_{50} 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} (IC_{50} = 0.49 µM). PU 02 also reduces growth of HepG2 cells in a dose-dependent manner *via* induction of cell cycle arrest at the G_2/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-HT_3 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).

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