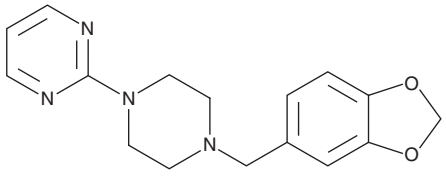
PRODUCT INFORMATION

Piribedil

Item No. 30321

CAS Registry No.:	3605-01-4
Formal Name:	2-[4-(1,3-benzodioxol-5-ylmethyl)-1-piperazinyl]-pyrimidine
MF:	$C_{16}H_{18}N_4O_2$
FW:	298.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 242 nm
Supplied as:	A 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

Piribedil is supplied as a solid. A stock solution may be made by dissolving the piribedil in the solvent of choice, which should be purged with an inert gas. Piribedil is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of piribedil in ethanol and DMSO is approximately 5 mg/ml and approximately 10 mg/ml in DMF.

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

Description

Piribedil is a dopamine receptor agonist.[1-4] It binds to dopamine D_2, D_3, and D_4 receptors (IC_{50}s = 1-1,000 nM in radioligand binding assays).[1] Piribedil (1 and 10 mg/kg) enhances spontaneous object recognition in young adult rats and attenuates age-related memory impairments in the radial arm maze in mice.[2] It reduces immobility time in the forced swim test in mice when administered at doses ranging from 0.63 to 10 mg/kg.[3] Piribedil (0.3 mg/kg) decreases the number of premature and delayed responses in a response time test, indicating improved attentional function, in a rat model of Parkinson's disease induced by 6-OHDA (Item No. 25330) when administered in combination with L-DOPA (Item No. 13248).[4]

References

1. Cagnotto, A., Parotti, L., and Mennini, T. In vitro affinity of piribedil for dopamine D_3 receptor subtypes, an autoradiographic study. *Eur. J. Pharmacol.* **313(1-2)**, 63-67 (1996).
2. Marighetto, A., Valerio, S., Philippin, J.N., *et al.* Comparative effects of the dopaminergic agonists piribedil and bromocriptine in three different memory paradigms in rodents. *J. Psychopharmacol.* **22(5)**, 511-521 (2008).
3. Brocco, M., Dekeyne, A., Papp, M., *et al.* Antidepressant-like properties of the anti-Parkinson agent, piribedil, in rodents: Mediation by dopamine D_2 receptors. *Behav. Pharmacol.* **17(7)**, 559-572 (2006).
4. Turle-Lorenzo, N., Maurin, B., Puma, C., *et al.* The dopamine agonist piribedil with L-DOPA improves attentional dysfunction: Relevance for Parkinson's disease. *J. Pharmacol. Exp. Ther.* **319(2)**, 914-923 (2006).

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