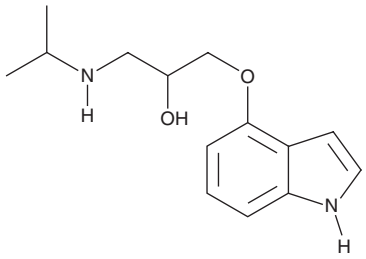
PRODUCT INFORMATION

Pindolol

Item No. 21445

CAS Registry No.:	13523-86-9
Formal Name:	1-(1H-indol-4-yloxy)-3-[(1-methylethyl)amino]-2-propanol
Synonym:	DL-Pindolol
MF:	$C_{14}H_{20}N_2O_2$
FW:	248.3
Purity:	≥99%
UV/Vis.:	λ_{max}: 218, 288 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

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

Pindolol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, pindolol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Pindolol 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

Pindolol is an antagonist of β_1- and β_2-adrenergic receptors (β_1- and β_2-ARs; K_is = 2.6 and 4.8 nM, respectively) and a partial agonist of the β_3-AR, stimulating adenylyl cyclase in membranes of cells expressing the human receptor.[1,2] It is also an antagonist of the serotonin 5-HT_{1A} receptor (K_i = 81.1 nM for inhibition of 5-HT-stimulated GTPγS binding).[3] Pindolol inhibits isoproterenol-induced tachycardia in anesthetized cats (ED_{50} = 1.8 µg/kg).[4] It also decreases mean blood pressure in conscious spontaneously hypertensive rats when administered at a dose of 30 mg/kg per day, but concomitantly increases heart rate.[5] Formulations containing pindolol have been used in the treatment of hypertension.

References

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2. Hoffmann, C., Leitz, M.R., Oberdorf-Maass, S., *et al. Naunyn-Schmiedeberg's Arch. Pharmacol.* **369(2)**, 151-159 (2004).
3. Krushinski, J.H., Jr., Schaus, J.M., Thompson, D.C., *et al. Bioorg. Med. Chem. Lett.* **17(20)**, 5600-5604 (2007).
4. Lubawski, I. and Wale, J. *Eur. J. Pharmacol.* **6(3)**, 345-348 (1969).
5. Antonaccio, M.J., High, J., DeForrest, J.M., *et al. J. Pharmacol. Exp. Ther.* **238(1)**, 378-387 (1986).

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