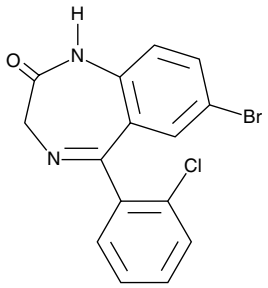
Product Information

Phenazepam

Item No. 9000849

CAS Registry No.:	51753-57-2
Formal Name:	7-bromo-5-(2-chlorophenyl)-1,3-dihydro-2H-1,4-benzodiazepin-2-one
Synonyms:	BD 98, Fenazepam
MF:	$C_{15}H_{10}BrClN_2O$
FW:	349.6
Purity:	≥98%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 230, 321 nm



Laboratory Procedures

For long term storage, we suggest that phenazepam be stored as supplied at -20°C. It should be stable for at least two years.

Phenazepam is supplied as a crystalline solid. A stock solution may be made by dissolving the phenazepam in the solvent of choice. Phenazepam is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of phenazepam in these solvents is approximately 0.2 mg/ml in ethanol and approximately 12.5 mg/ml in DMSO and DMF.

Phenazepam is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, phenazepam should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Phenazepam 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.

Phenazepam is a benzodiazepine agonist of the γ-aminobutyric acid A ($GABA_A$)-benzodiazepine receptor chloride channel complex.[1] It has been shown to have strong anxiolytic, sedative, anticonvulsive, and hypnotic properties in humans as well as in animal species when administered at 1 mg/kg.[1] At very low doses (10^{-5} to 10^{-10} mg/kg), phenazepam has been shown to act as an anxioselective tranquilizer.[2-4]

References

1. Kalinina, T.S., Garibova, T.L., and Voronina, T.A. Descriminative effects of phenazepam and gidazepam in rats: comparison with other GABA-related drugs. *Pharmacol. Biochem. Behav.* **64(2)**, 397-401 (1999).
2. Voronina, T.A., Molodavkin, G.M., Chernyavskaya, L.I., *et al.* Effects of phenazepam in ultralow doses on bioelectric activity of the brain and behavior of rats in various models of anxiety. *Bull. Exp. Biol. Med.* **135**, 14-6 (2003).
3. Molodavkin, G.M., Voronina, T.A., Chernyavskaya, L.I., *et al.* Pharmacological activity of phenazepam and flunitrazepam in ultralow doses. *Bull. Exp. Biol. Med.* **135**, 39-41 (2003).
4. Molochkina, E.M., Ozerova, I.B., and Burlakova, E.B. Phenazepam in therapeutic and ultralow doses *in vitro* modulates the content of lipid peroxidation products and acetylcholinesterase activity in membrane fraction from mouse brain. *Bull. Exp. Biol. Med.* **135**, 42-4 (2093).

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