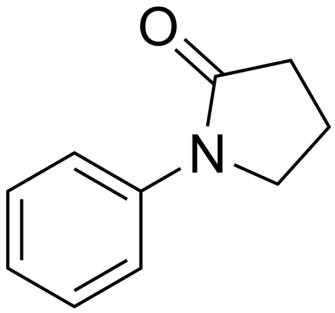
1-Phenyl-2-pyrrolidinone



Cat. No.:	HY-W103463
CAS No.:	4641-57-0
Molecular Formula:	$C_{10}H_{11}NO$
Molecular Weight:	161.2
Target:	GABA Receptor
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (620.35 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	6.2035 mL	31.0174 mL	62.0347 mL
	5 mM	1.2407 mL	6.2035 mL	12.4069 mL
	10 mM	0.6203 mL	3.1017 mL	6.2035 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (15.51 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (15.51 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (15.51 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

1-Phenyl-2-pyrrolidinone (1-Phenylpyrrolidin-2-one) is a phenyl analogue of GABA with sedative effect, decreasing the exploratory behavior of rats at 50-100 mg/kg (i.v.). 1-Phenyl-2-pyrrolidinone also has been proved to inhibit emotional reactions in dogs and cats. 1-Phenyl-2-pyrrolidinone induces decreases in the pressor reaction to emotional stress without accompanied by normalization of the function of baroreceptor reflexes[1][2].

REFERENCES

[1]. Patkina N, et al. Some psychotropic effects of phenibut and phenylpyrrolidone. Trudy Volgogradskogo Gosudarstvennogo Meditsinskogo Instituta (1979), 31(3), 63-6.

[2]. Kovalev GV, et al. Effect of γ-aminobutyric acid derivatives on baroreceptor reflexes in nonanesthetized animals. Russian. 1980, (VINITI 1311-80), 10 pp.

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