

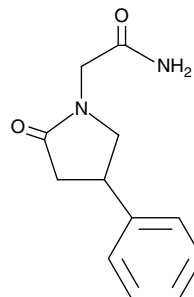
Product Information



Phenylpiracetam

Item No. 13897

CAS Registry No.: 77472-70-9
Formal Name: 2-oxo-4-phenyl-1-pyrrolidineacetamide
Synonyms: Carphedon, Phenotropil™
MF: C₁₂H₁₄N₂O₂
FW: 218.3
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in acetonitrile



Laboratory Procedures

For long term storage, we suggest that phenylpiracetam be stored as supplied at -20°C. It should be stable for at least one year.

Phenylpiracetam is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the phenotropil under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of phenylpiracetam in these solvents is approximately 16, 14, and 20 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of phenylpiracetam is needed, it can be prepared by evaporating the acetonitrile and directly dissolving the neat oil in aqueous buffers. The solubility of phenylpiracetam in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Phenylpiracetam is a nootropic derivative of the GABAergic agent piracetam and has been evaluated for its efficacy in reducing neurological deficits related to cerebral ischemia, epilepsy, and neurobehavioral disorders.¹⁻² At 10-100 mg/kg in mice, phenylpiracetam can increase locomotor and antidepressant activity in the open-field and forced swimming tests, as well as enhance memory in a passive avoidance response test.¹ Because of its cognitive enhancing and general stimulant properties, phenylpiracetam has the potential to be abused recreationally and is listed as a banned substance by the World Anti-Doping Agency and the International Olympic Committee.³ This product is intended for research and forensic purposes only.

References

1. Zvejniece, L., Svalbe, B., Veinberg, G., *et al.* Investigation into stereoselective pharmacological activity of phenotropil. *Basic Clin. Pharmacol. Toxicol.* **109**(5), 407-412 (2011).
2. Stewart, A.M. and Kalueff, A.V. The developing utility of zebrafish models for cognitive enhancers research. *Curr. Neuropharmacol.* **10**(3), 263-271 (2012).
3. Kim, S., Park, J.-H., Myung, S.-W., *et al.* Determination of carphedon in human urine by solid-phase microextraction using capillary gas chromatography with nitrogen-phosphorus detection. *Analyst* **124**(11), 1559-1562 (1999).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/13897

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WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

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