



# SZABO SCANDIC

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## Produktinformation



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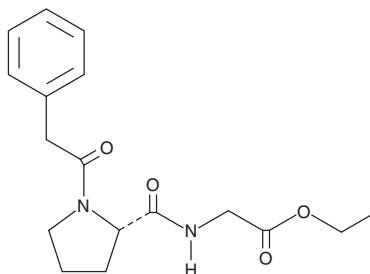
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# PRODUCT INFORMATION

## N-Phenylacetyl-L-Prolylglycine ethyl ester

Item No. 14496

**CAS Registry No.:** 157115-85-0  
**Formal Name:** 1-(2-phenylacetyl)-L-prolylglycine, ethyl ester  
**Synonyms:** GVS-111, Noopept, SGS 111  
**MF:**  $C_{17}H_{22}N_2O_4$   
**FW:** 318.4  
**Purity:**  $\geq 98\%$   
**Supplied as:** A crystalline solid  
**Storage:**  $-20^{\circ}\text{C}$   
**Stability:**  $\geq 2$  years



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

### Laboratory Procedures

N-Phenylacetyl-L-prolylglycine ethyl ester is supplied as a crystalline solid. A stock solution may be made by dissolving the N-phenylacetyl-L-prolylglycine ethyl ester in the solvent of choice. N-Phenylacetyl-L-prolylglycine ethyl ester is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of N-phenylacetyl-L-prolylglycine ethyl ester in ethanol is approximately 20 mg/ml and approximately 25 mg/ml in DMSO and DMF.

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. Organic solvent-free aqueous solutions of N-phenylacetyl-L-prolylglycine ethyl ester can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N-phenylacetyl-L-prolylglycine ethyl ester in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

N-Phenylacetyl-L-prolylglycine ethyl ester is a synthetic dipeptide that has been shown to produce positive nootropic and cognitive effects in animal models (0.01-0.8 mg/kg) by a mechanism similar to other related racetam compounds.<sup>1</sup> It can rescue neuroblastoma SH-SY5Y cells from amyloid-induced cytotoxicity, indicating a potential application in the treatment of neurodegenerative diseases.<sup>2</sup> It also demonstrates antioxidant and anti-inflammatory effects, which have been examined in the context of an anti-diabetic agent.<sup>3</sup> This compound was recently identified in illegal designer herbal products distributed in Japan and is intended for research and forensic purposes only.<sup>4</sup>

### References

1. Gudasheva, T.A., Voronins, T.A., Ostrovskaya, R.U., *et al.* Synthesis and antiamnesic activity of a series of IV-acetylprolyl-containing dipeptides. *Eur. J. Med. Chem.* **31**, 151-157 (1996).
2. Jia, X., Gharibyan, A.L., Öhman, A., *et al.* Neuroprotective and nootropic drug noopept rescues  $\alpha$ -synuclein amyloid cytotoxicity. *J. Mol. Biol.* **414**(5), 699-712 (2011).
3. Ostrovskaya, R.U., Ozerova, I.V., Gudasheva, T.A., *et al.* Efficiency of noopept in streptozotocin-induced diabetes in rats. *Bull. Exp. Biol. Med.* **154**(3), 334-338 (2013).
4. Uchiyama, N., Matsuda, S., Kawamura, M., *et al.* Identification of two new-type designer drugs, piperazine derivative MT-45 (I-C6) and synthetic peptide Noopept (GVS-111), with synthetic cannabinoid A-834735, cathinone derivative 4-methoxy- $\alpha$ -PVP, and phenethylamine derivative 4-methylbuphedrine from illegal products. *Forensic Toxicol.* (2013).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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