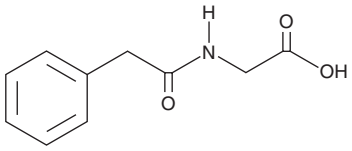
# PRODUCT INFORMATION

## Phenylacetylglycine

*Item No. 36368*

**CAS Registry No.:** 500-98-1
**Formal Name:** N-(2-phenylacetyl)-glycine
**Synonyms:** NSC 408424, NSC 92778, PAG, PAGly, Phenaceturic Acid, N-Phenylacetylglycine
**MF:** $C_{10}H_{11}NO_3$
**FW:** 193.2
**Purity:** ≥98%
**Supplied as:** A solid
**Storage:** -20°C
**Stability:** ≥4 years




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

### Laboratory Procedures

Phenylacetylglycine is supplied as a solid. A stock solution may be made by dissolving the phenylacetylglycine in the solvent of choice, which should be purged with an inert gas. Phenylacetylglycine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of phenylacetylglycine in these solvents is approximately 1, 10, and 25 mg/ml, respectively.

### Description

Phenylacetylglycine is a glycine conjugate of phenylacetate.[1-4] It is formed *via* the conversion of phenylalanine by gut microbiota to phenylacetic acid followed by glycine conjugation in the liver.[4,5] Phenylacetylglycine (100 µM) decreases hypoxia-induced apoptosis in neonatal mouse cardiomyocytes.[3] Levels of phenylacetylglycine in urine and plasma are increased in a rat model of phospholipidosis induced by the antiarrhythmic agent amiodarone (Item No. 15213).[1] Phenylacetylglycine reduces myocardial infarct size in a mouse model of ischemia-reperfusion injury.[3]

### References


1. Kamiguchi, H., Murabayashi, M., Mori, I., *et al*. Biomarker discovery for drug-induced phospholipidosis: Phenylacetylglycine to hippuric acid ratio in urine and plasma as potential markers. *Biomarkers* **22(2)**, 178-188 (2016).
2. Jones, A.R. Some observations on the urinary excretion of glycine conjugates by laboratory animals. *Xenobiotica* **12(6)**, 387-395 (1982).
3. Xu, X., Lu, W.-J., Shi, J.-Y., *et al*. The gut microbial metabolite phenylacetylglycine protects against cardiac injury caused by ischemia/reperfusion through activating β2AR. *Arch. Biochem. Biophys*. **697**, 108720 (2021).
4. Nemet, I., Saha, P.P., Gupta, N., *et al*. A cardiovascular disease-linked gut microbial metabolite acts via adrenergic receptors. *Cell* **180(5)**, 862-877.e22 (2020).
5. Zhu, Y., Dwidar, M., Nemet, I., *et al*. Two distinct gut microbial pathways contribute to meta-organismal production of phenylacetylglutamine with links to cardiovascular disease. *Cell Host Microbe* **31(1)**, 18-32.e9 (31(1)).





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