

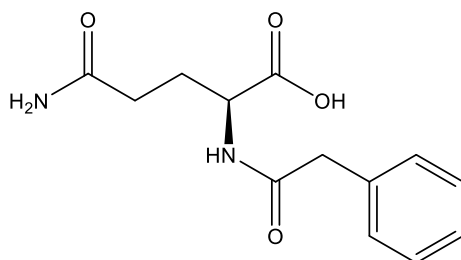
Catalog # 10-5706

Phenylacetyl-L-glutamine

CAS# 28047-15-6

(S)-5-Amino-5-oxo-2-(2-phenylacetamido)pentanoic acid, N-Phenylacetylglutamine, Phenylacetylglutamine; PhenylAc-Gln-OH; NSC-203800; PAG

Lot # X109193



A microbial-mammalian host co-metabolite which increases with age¹ and especially in extreme longevity². Gut-microbiota-dependent PAG is associated with cardiovascular disease pathogenesis³ *via* action at adrenergic receptors⁴. Plasma PAG levels may be a valuable indicator for predicting coronary in-stent restenosis.⁵

- 1) Swann *et al.* (2013) *Microbial-mammalian cometabolites dominate the age-associated urinary metabolic phenotype in Taiwanese and American populations*; J. Proteome Res. **12** 3166
- 2) Collino *et al.* (2013) *Metabolic signatures of extreme longevity in northern Italian centenarians reveal a complex remodeling of lipids, amino acids, and gut microbiota metabolism*; PLoS One **8** 1
- 3) Romano *et al.* (2022) *Gut Microbiota-Generated Phenylacetylglutamine and Heart Failure*; Circ. Heart Fail. Dec 16 e009972 online ahead of print
- 4) Nemet *et al.* (2020) *A Cardiovascular Disease-Linked Gut Microbial Metabolite Acts via Adrenergic Receptors*; Cell **180** 862
- 5) Yua *et al.* (2022) *Prognostic value of plasma phenylalanine and gut microbiota-derived metabolite phenylacetylglutamine in coronary in-stent restenosis*; Front. Cardiovasc. Med. **9** 944155

PHYSICAL DATA

Molecular Weight:	264.28
Molecular Formula:	C ₁₃ H ₁₆ N ₂ O ₄
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (45 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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