

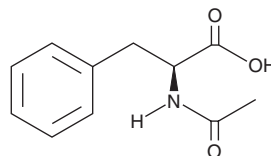
# PRODUCT INFORMATION



## N-Acetyl-L-phenylalanine

Item No. 36253

CAS Registry No.: 2018-61-3  
Synonyms: Acetyl-L-phenylalanine,  
Acetylphenylalanine, NSC 45699  
MF:  $C_{11}H_{13}NO_3$   
FW: 207.2  
Purity:  $\geq 98\%$   
Supplied as: A solid  
Storage: 20°C  
Stability:  $\geq 4$  years



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

### Laboratory Procedures

N-Acetyl-L-phenylalanine is supplied as a solid. A stock solution may be made by dissolving the N-acetyl-L-phenylalanine in the solvent of choice, which should be purged with an inert gas. N-Acetyl-L-phenylalanine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of N-acetyl-L-phenylalanine in these solvents is approximately 12 and 16 mg/ml, respectively. N-Acetyl-L-phenylalanine is slightly soluble in ethanol.

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-acetyl-L-phenylalanine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of N-acetyl-L-phenylalanine in PBS (pH 7.2) is approximately 0.25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

N-Acetyl-L-phenylalanine is a metabolite of L-phenylalanine (Item No. 31498).<sup>1</sup> It is formed from L-phenylalanine by gut microbiota. Serum levels of N-acetyl-L-phenylalanine are increased in male COVID-19 patients compared with female COVID-19 patients and individuals without COVID-19, and hippocampal levels of N-acetyl-L-phenylalanine are increased in postmortem brain tissue isolated from patients with Alzheimer's disease.<sup>1,2</sup> Urinary levels of N-acetyl-L-phenylalanine are negatively correlated with phthalate exposure in normal weight, but not overweight, children.<sup>3</sup>

### References

1. Escarcega, R.D., Honarpisheh, P., Colpo, G.D., *et al.* Sex differences in global metabolomic profiles of COVID-19 patients. *Cell Death Dis.* **13(5)**, 461 (2022).
2. Liu, P., Yang, Q., Yu, N., *et al.* Phenylalanine metabolism is dysregulated in human hippocampus with Alzheimer's disease related pathological changes. *J. Alzheimers Dis.* **83(2)**, 609-622 (2021).
3. Xia, B., Zhu, Q., Zhao, Y., *et al.* Phthalate exposure and childhood overweight and obesity: Urinary metabolomic evidence. *Environ. Int.* **121(Pt 1)**, 159-168 (2018).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/30/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM