

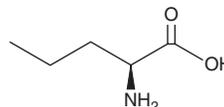
PRODUCT INFORMATION



L-Norvaline

Item No. 34029

CAS Registry No.: 6600-40-4
Synonyms: α-L-Aminopentanoic Acid, L-Nva, NSC 203786
MF: C₅H₁₁NO₂
FW: 117.1
Purity: ≥95%
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

L-Norvaline is supplied as a solid. Aqueous solutions of L-norvaline can be prepared by directly dissolving the solid in aqueous buffers. The solubility of L-norvaline in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

L-Norvaline is a non-proteinogenic amino acid, an isomer of valine, and an inhibitor of arginase and p70 ribosomal S6 kinase 1 (p70S6K1) kinase.^{1,2} It inhibits arginase-mediated urea production in J774A.1 macrophage lysates when used at a concentration of 10 mM and TNF-α-induced p70S6K1 activation in human umbilical vein endothelial cells (HUVECs) at 20 mM.¹ L-Norvaline reduces microgliosis and the level of amyloid-β fibrils in the hippocampus, as well as improves learning and memory in the Morris water maze in the 3xTg mouse model of Alzheimer's disease.³

References

1. Chang, C.-I., Liao, J.C., and Kuo, L. Arginase modulates nitric oxide production in activated macrophages. *Am. J. Physiol.* **274**(1), H342-H348 (1998).
2. Ming, X.-F., Rajapakse, A.G., Carvas, J.M., *et al.* Inhibition of S6K1 accounts partially for the anti-inflammatory effects of the arginase inhibitor L-norvaline. *BMC Cardiovasc. Disord.* **9**, 12 (2009).
3. Polis, B., Srikanth, K.D., Elliott, E., *et al.* L-Norvaline reverses cognitive decline and synaptic loss in a murine model of Alzheimer's disease. *Neurotherapeutics* **15**(4), 1036-1054 (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, 12/05/2022

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