

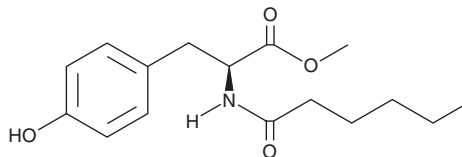
PRODUCT INFORMATION



Defensamide

Item No. 37318

CAS Registry No.: 1104874-94-3
Formal Name: N-(1-oxohexyl)-L-tyrosine, methyl ester
Synonyms: (S)-methyl-2-hexanamido-3-(4-hydroxyphenyl)propanoate
MF: C₁₆H₂₃NO₄
FW: 293.4
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

Defensamide is supplied as a solid. A stock solution may be made by dissolving the defensamide in the solvent of choice, which should be purged with an inert gas. Defensamide is soluble in methanol and DMSO.

Description

Defensamide is an activator of sphingosine kinase 1 (SPHK1).¹ It increases sphingosine-1-phosphate (S1P) levels in primary human keratinocytes but does not affect S1P lyase activity in the same cells when used at a concentration of 100 μM. Defensamide (100 μM) increases protein levels of cathelicidin antimicrobial peptide (CAMP), also known as LL-37 (Item No. 24461), in primary human keratinocytes. It inhibits the invasion of *S. aureus* into murine skin *ex vivo*. Defensamide has also been used as an intermediate in the synthesis of the fungal metabolites sinuxylamide A as well as compounds with anticancer and antibacterial activities.^{2,3}

References

1. Jeong, S.K., Kim, Y.I., Shin, K.-O., *et al.* Sphingosine kinase 1 activation enhances epidermal innate immunity through sphingosine-1-phosphate stimulation of cathelicidin production. *J. Dermatol. Sci.* **79(3)**, 229-234 (2015).
2. Annapurna, K., Rao, K.S., and Narsaiah, A.V. Synthesis of glycoprotein inhibitory agents sinuxylamide A-E *Indian J. Chem.* **61**, 1039-1045 (2022).
3. Vudhgi, S., Prasad, R.B.N., Poornachandra, Y., *et al.* The impact of sugar and fatty acid on the bioactivity of N-fatty acyl-L-tyrosine aglycone. *J. Chem. Sci.* **129(6)**, 663-677 (2017).

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, 10/30/2023

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