

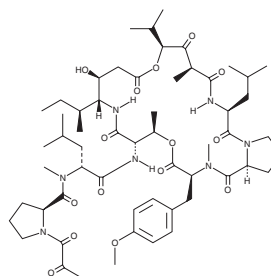
PRODUCT INFORMATION



Plitidepsin

Item No. 34053

CAS Registry No.: 137219-37-5
Formal Name: N-[1-(1,2-dioxopropyl)-L-prolyl]-didemnin A
Synonyms: Aplidin, Dehydrodidemnin B
MF: C₅₇H₈₇N₇O₁₅
FW: 1,110.3
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Synthetic



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

Laboratory Procedures

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

Description

Plitidepsin is a depsipeptide that was originally isolated from *Aplidium albicans* and has diverse biological activities.¹⁻³ It binds to the α subunit isoform eEF1A2 of eukaryotic elongation factor 1 (eEF1; $K_d = 79$ nM) and inhibits the proliferation of NCI H460 non-small cell lung cancer (NSCLC) and HGC-27 gastric cancer cells (IC_{50} s = 0.2 and 0.9 nM, respectively).¹ Plitidepsin (0.01 nM) inhibits bone resorption by osteoclasts in a pit formation assay using bovine bone slices.² It reduces viral titers and lung inflammation in the K18-hACE2 mouse model of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection when administered at a dose of 0.3 mg/kg.³

References

1. Losada, A., Muñoz-Alonso, M.J., García, G., *et al.* Translation elongation factor eEF1A2 is a novel anticancer target for the marine natural product plitidepsin. *Sci. Rep.* **6**, 35100 (2016).
2. Delgado-Calle, J., Kurihara, N., Atkinson, E.G., *et al.* Aplidin (plitidepsin) is a novel anti-myeloma agent with potent anti-resorptive activity mediated by direct effects on osteoclasts. *Oncotarget* **10(28)**, 2709-2721 (2019).
3. White, K.M., Rosales, R., Yildiz, S., *et al.* Plitidepsin has potent preclinical efficacy against SARS-CoV-2 by targeting the host protein eEF1A. *Science* **371(6532)**, 926-931 (2021).

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.

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