

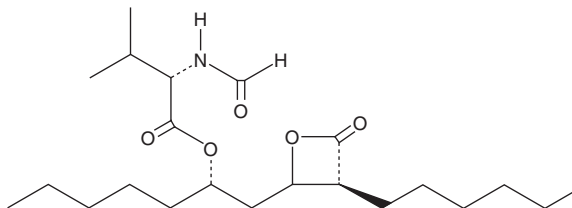
PRODUCT INFORMATION



Valilactone

Item No. 13690

CAS Registry No.: 113276-96-3
Formal Name: N-formyl-L-valine, (1S)-1-[[[(2S,3S)-3-hexyl-4-oxo-2-oxetanyl]methyl]hexyl ester
Synonym: (-)-Valilactone
MF: C₂₂H₃₉NO₅
FW: 397.6
Purity: ≥98%
Supplied as: A crystalline 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

Valilactone is supplied as a crystalline solid. A stock solution may be made by dissolving the valilactone in the solvent of choice, which should be purged with an inert gas. Valilactone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of valilactone in ethanol is approximately 10 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Valilactone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, valilactone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Valilactone has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Valilactone is an esterase inhibitor produced by a cultured strain of soil actinomycetes.¹ It is reported to inhibit hog liver esterase and hog pancreas lipase with IC₅₀ values of 29 and 0.14 ng/ml, respectively.¹ Valilactone can also inhibit fatty acid synthase with an IC₅₀ value of 0.30 μM and demonstrates selective toxicity towards MDA-MB-231 breast cancer cells with an IC₅₀ value of 10.5 μM.²

References

1. Kitahara, M., Asano, M., Naganawa, H., *et al.* Valilactone, an inhibitor of esterase, produced by actinomycetes. *J. Antibiot. (Tokyo)* **40(11)**, 1647-1650 (1987).
2. Richardson, R.D., Ma, G., Oyola, Y., *et al.* Synthesis of novel β-lactone inhibitors of fatty acid synthase. *J. Med. Chem.* **51(17)**, 5285-5296 (2008).

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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