

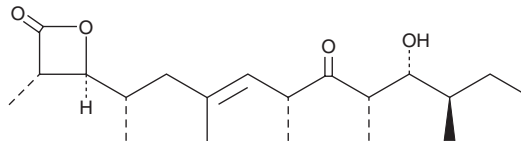
PRODUCT INFORMATION



Ebelactone A

Item No. 19163

CAS Registry No.: 76808-16-7
Formal Name: (3S,4S)-4-[(1S,3E,5R,7S,8R,9R)-8-hydroxy-1,3,5,7,9-pentamethyl-6-oxo-3-undecen-1-yl]-3-methyl-2-oxetanone
Synonyms: (-)-Ebelactone A, NSC 335650
MF: C₂₀H₃₄O₄
FW: 338.5
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

Ebelactone A is supplied as a crystalline solid. A stock solution may be made by dissolving the ebelactone A in the solvent of choice. Ebelactone A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ebelactone A in ethanol is approximately 20 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Ebelactone A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ebelactone A should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Ebelactone A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ebelactone A is a β -lactone enzyme inhibitor that was first isolated from a cultured strain of soil actinomycetes.¹ It can inhibit esterases, lipases, and N-formylmethionine aminopeptidases (IC₅₀s = 0.056, 0.003, and 0.08 μ g/ml, respectively) found on cell surfaces, which has been shown to stimulate host defense in immune cells.² Ebelactone A is also reported to inhibit cutinases produced by fungal pathogens, thus demonstrating a plant-protective function.³

References

1. Uotani, K., Naganawa, H., Kondo, S., *et al.* Structural studies on ebelactone A and B, esterase inhibitors produced by actinomycetes. *J. Antibiot. (Tokyo)* **35(11)**, 1495-1499 (1982).
2. Umezawa, H., Aoyagi, T., Uotani, K., *et al.* Ebelactone, an inhibitor of esterase, produced by actinomycetes. *J. Antibiot. (Tokyo)* **33(12)**, 1594-1596 (1980).
3. Köller, W., Trail, F., and Parker, D.M. Ebelactones inhibit cutinases produced by fungal plant pathogens. *J. Antibiot. (Tokyo)* **43(6)**, 734-735 (1990).

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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