

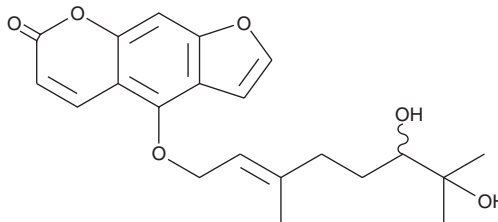
PRODUCT INFORMATION



6,7-dihydroxy Bergamottin

Item No. 10009598

CAS Registry No.: 145414-76-2
Formal Name: 4-[[[(2E)-6,7-dihydroxy-3,7-dimethyl-2-octeny]oxy]-7H-furo[3,2-g][1]benzopyran-7-one
Synonyms: 6,7-DHB
MF: C₂₁H₂₄O₆
FW: 372.4
Purity: ≥98%
UV/Vis.: λ_{max}: 221, 250, 309 nm
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

6,7-dihydroxy Bergamottin is supplied as a crystalline solid. A stock solution may be made by dissolving the 6,7-dihydroxy bergamottin in the solvent of choice, which should be purged with an inert gas. 6,7-dihydroxy Bergamottin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 6,7-dihydroxy bergamottin in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

6,7-dihydroxy Bergamottin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6,7-dihydroxy bergamottin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 6,7-dihydroxy Bergamottin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

6,7-dihydroxy Bergamottin (6,7-DHB) is a potent inhibitor of CYP3A4 (IC₅₀ = 25 μM).¹ It appears to be the primary compound in grapefruit juice that is responsible for inhibition of testosterone 6β-hydroxylase activity. Ingestion of grapefruit juice during treatment regimes with drugs normally metabolized by cytochrome P450 enzymes of the CYP3A subfamily results in a substantial increase in plasma concentration of these agents.^{1,2} However, giving a patient grapefruit juice or just 6,7-DHB could be advantageous in cases where a drug is metabolized too quickly by CYP3A4.

References

1. Edwards, D.J., Bellevue, F.H., III, and Woster, P.M. Identification of 6',7'-dihydroxybergamottin, a cytochrome P450 inhibitor, in grapefruit juice. *Drug Metab. Dispos.* **24(12)**, 1287-1290 (1996).
2. Bellevue, F.H., III, Woster, P.M., Edwards, D.J., *et al.* Synthesis and biological evaluation of 6',7'-dihydroxybergamottin (6,7-DHB), a naturally occurring inhibitor of cytochrome P450 3A4. *Bioorg. Med. Chem. Lett.* **7(20)**, 2593-2598 (1997).

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, 01/25/2024

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