

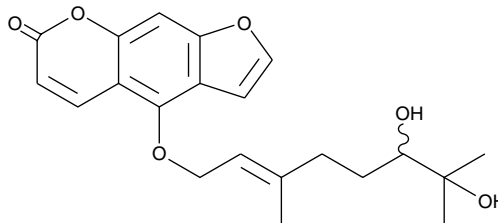
Product Information



6,7-dihydroxy Bergamottin

Item No. 10009598

CAS Registry No.: 145414-76-2
Formal Name: 4-[[[(2E)-6,7-dihydroxy-3,7-dimethyl-2-octenyl]oxy]-7H-furo[3,2-g][1]benzopyran-7-one
Synonym: 6,7-DHB
MF: C₂₁H₂₄O₆
FW: 372.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 221, 250, 309 nm



Laboratory Procedures

For long term storage, we suggest that 6,7-dihydroxy bergamottin (6,7-DHB) be stored as supplied at -20°C. It should be stable for at least two years.

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

6,7-DHB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6,7-DHB should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 6,7-DHB 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.

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.I., 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.I., 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. *Bioorganic & Medicinal Chemistry Letters* **7**(20), 2593-2598 (1997).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009598

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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