



# SZABO SCANDIC

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## Produktinformation



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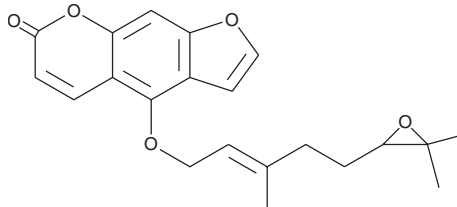
# PRODUCT INFORMATION



## 6',7'-Epoxybergamottin

Item No. 19760

**CAS Registry No.:** 206978-14-5  
**Formal Name:** 4-[[[(2E)-5-(3,3-dimethyl-2-oxiranyl)-3-methyl-2-penten-1-yl]oxy]-7H-furo[3,2-g][1]benzopyran-7-one  
**Synonyms:** Epoxybergamottin  
**MF:** C<sub>21</sub>H<sub>22</sub>O<sub>5</sub>  
**FW:** 354.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 251, 311 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

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

6',7'-Epoxybergamottin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 6',7'-epoxybergamottin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 6',7'-Epoxybergamottin 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'-Epoxybergamottin is a furanocoumarin found in grapefruit.<sup>1</sup> It is a potent inhibitor of the cytochrome P450 (CYP) isoform CYP3A4 with an IC<sub>50</sub> value of 0.30 ppm in a cell-free assay, 0.33 μM in HL7 human liver cells, and 0.22 μM in S9 human intestine cells.<sup>2</sup> It has been studied in the context of drug interactions with grapefruit constituents. It is found in grapefruit juice at concentrations of 0.1-7.4 μM and inhibits the transport of talinolol (Item No. 16116), a permeability glycoprotein (P-gp/ABCB1) transporter substrate, across Caco-2 cell monolayers (IC<sub>50</sub> = 0.7 μM).<sup>3</sup> 6',7'-Epoxybergamottin also has insecticidal properties with a concentration of 5 μg/cm<sup>2</sup> leading to 100% mortality of adult olive fruit flies.<sup>4</sup>

### References

1. Manthey, J.A., Myung, K., Mertens-Talcott, S., et al. *Proc. Fla. State Hort. Soc.* **119(1)**, 361-366 (2006).
2. Row, E.C., Brown, S.A., Stachulski, A.V., et al. *Org. Biomol. Chem.* **4(8)**, 1604-1610 (2006).
3. de Castro, W.V., Mertens-Talcott, S., Derendorf, H., et al. *J. Pharm. Sci.* **96(10)**, 2808-2817 (2007).
4. Siskos, E.P., Mazomenos, B.E., and Konstantopoulou, M.A. *J. Agric. Food Chem.* **56(14)**, 577-5581 (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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