

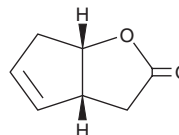
# PRODUCT INFORMATION



## (-)-G-Lactone

Item No. 30488

**CAS Registry No.:** 43119-28-4  
**Formal Name:** 3,3aR,6,6aS-tetrahydro-2H-cyclopenta[b]furan-2-one  
**MF:** C<sub>7</sub>H<sub>8</sub>O<sub>2</sub>  
**FW:** 124.1  
**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

(-)-G-Lactone is supplied as a crystalline solid. A stock solution may be made by dissolving the (-)-G-lactone in the solvent of choice, which should be purged with an inert gas. (-)-G-Lactone is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (-)-G-lactone in ethanol is approximately 15 mg/ml and approximately 30 mg/ml in DMSO and DMF.

(-)-G-Lactone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (-)-G-lactone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (-)-G-Lactone has a solubility of approximately 0.33 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

(-)-G-lactone is a bicyclic  $\gamma$ -lactone prostaglandin chiral synthon and a building block.<sup>1,2</sup> It is a prostaglandin chiral synthon formed from an asymmetric Baeyer-Villiger oxidation reaction.<sup>1</sup> (-)-G-lactone has also been used as a building block in the synthesis of HIV-1 protease inhibitors.<sup>2</sup>

### References

1. Alphand, V., Archelas, A., and Furstoss, R. Microbial Transformations 16. One-step synthesis of a pivotal prostaglandin chiral synthon via a highly enantioselective microbiological Baeyer-Villiger type reaction. *Tetrahedron Lett.* **30(28)**, 3663-3664 (1989).
2. Ghosh, A.K., Chapsal, B.D., Baldrige, A., *et al.* Design and synthesis of potent HIV-1 protease inhibitors incorporating hexahydrofuropyranol-derived high affinity P<sub>2</sub> ligands: Structure-activity studies and biological evaluation. *J. Med. Chem.* **54(2)**, 622-634 (2011).

#### 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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#### 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](http://WWW.CAYMANCHEM.COM)