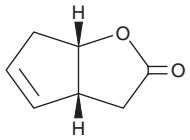
PRODUCT INFORMATION

(–)-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: $C_7H_8O_2$
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 γ-lactone prostaglandin chiral synthon and a building block.[1,2] It is a prostaglandin chiral synthon formed from an asymmetric Baeyer-Villiger oxidation reaction.[1] (–)-G-lactone has also been used as a building block in the synthesis of HIV-1 protease inhibitors.[2]

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., Baldridge, A., *et al.* Design and synthesis of potent HIV-1 protease inhibitors incorporating hexahydrofuropyranol-derived high affinity P_2 ligands: Structure-activity studies and biological evaluation. *J. Med. Chem.* **54(2)**, 622-634 (2011).

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