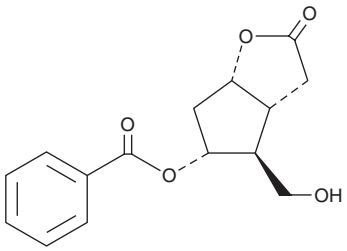
PRODUCT INFORMATION

Corey Lactone Benzoate

Item No. 10007983

CAS Registry No.: 39746-00-4
Formal Name: (3aR,4S,5R,6aS)-5-(benzoyloxy)hexahydro-4-(hydroxymethyl)-2H-cyclopenta[b]furan-2-one
Synonyms: (-)-Corey Lactone Benzoate, (-)-Corey Lactone Benzoate Alcohol
MF: $C_{15}H_{16}O_5$
FW: 276.3
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

Corey lactone benzoate is supplied as a crystalline solid. A stock solution may be made by dissolving the corey lactone benzoate in the solvent of choice, which should be purged with an inert gas. Corey lactone benzoate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of corey lactone benzoate in these solvents is approximately 39.7, 25.3, and 40.3 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of corey lactone benzoate can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of corey lactone benzoate in PBS (pH 7.2) is approximately 60 µg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Corey lactone benzoate is a precursor that has been used in the synthesis of prostaglandins (PGs), as well as the agonist of the PGE_2 receptor subtype EP_4 rivenprost (Item No. 13618).[1,2]

References

1. Fleming, I. and Winter, S.B.D. Stereocontrol in organic synthesis using silicon-containing compounds. A formal synthesis of prostaglandins controlling the stereochemistry at C-15 using a silyl-to-hydroxy conversion following a stereochemically convergent synthesis of an allylsilane. *J. Chem. Soc. Perkin Trans. 1* **17**, 2687-2700 (1998).
2. Ohta, C., Kuwabe, S.i., Shiraishi, T., *et al.* An improved synthesis of the selective EP4 receptor agonist ONO-4819. *J. Org. Chem.* **74(21)**, 8298-8308 (2009).

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