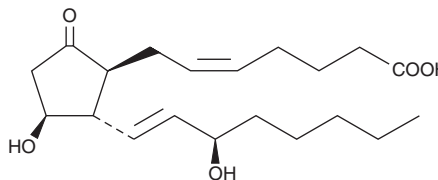


PRODUCT INFORMATION



ent-Prostaglandin E₂ Item No. 10008294

CAS No.: 65085-69-0
Formal Name: 9-oxo-11 β ,15R-dihydroxy-(8 β ,12 α)-prosta-5Z,13E-dien-1-oic acid
Synonym: ent-PGE₂
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: \geq 98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: \geq 2 years



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

Laboratory Procedures

ent-PGE₂ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of ent-PGE₂ in these solvents is approximately 50 mg/ml.

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. If an organic solvent-free solution of ent-PGE₂ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of ent-PGE₂ in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Enzymatically-derived PGE₂ is an optically pure compound whereas PGE₂ derived from the free radical-catalyzed peroxidation of arachidonate is a racemic mixture. Ent-PGE₂ is the opposite enantiomer of PGE₂. Significant amounts of racemic PGE₂ (rac-PGE₂) are generated *in vitro* and *in vivo* in settings of oxidative stress via the isoprostane pathway. A proposed mechanism for the formation of rac-PGE₂ involves the base catalyzed equilibration from 15-E_{2t}-isoprostane (8-iso-PGE₂), generated from the 15-H_{2t}-isoprostane endoperoxide.¹

Reference

1. Gao, L., Zackert, W.E., Hasford, J.J., *et al.* Formation of prostaglandin E₂ and prostaglandin D₂ via the isoprostane pathway: A mechanism for the generation of bioactive prostaglandins independent of the cyclooxygenase. *J. Biol. Chem.* **278**(31), 28479-28489 (2003).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 03/07/2024

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