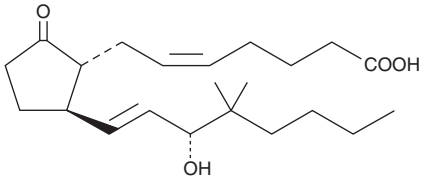
PRODUCT INFORMATION

11-deoxy-16,16-dimethyl Prostaglandin E_2

Item No. 14570

CAS Registry No.: 53658-98-3
Formal Name: 15R-hydroxy-16,16-dimethyl-9-oxo-prosta-5Z,13E-dien-1-oic acid
Synonym: 11-deoxy-16,16-dimethyl PGE_2
MF: $C_{22}H_{36}O_4$
FW: 364.5
Purity: ≥98%
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

11-deoxy-16,16-dimethyl Prostaglandin E_2 (11-deoxy-16,16-dimethyl PGE_2) 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 11-deoxy-16,16-dimethyl PGE_2 in these solvents is approximately 100 mg/ml.

11-deoxy-16,16-dimethyl PGE_2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 11-deoxy-16,16-dimethyl PGE_2 should be diluted with the aqueous buffer of choice. The solubility of 11-deoxy-16,16-dimethyl PGE_2 in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

11-deoxy-16,16-dimethyl PGE_2 is a stable synthetic analog of PGE_2. It is an agonist for both EP_2 and EP_3 receptors.[1] It is an effective inhibitor of gastric acid secretion and ulcer formation in the rat, with ED_{50} values of 1 mg/kg and 0.021 mg/kg respectively.[2] It is 900 times more potent than $PGF_{2\alpha}$ in the contraction of human respiratory tract smooth muscle *in vitro*.[3]

References

1. Parrott, R.F. and Vellucci, S.V. Effects of centrally administered prostaglandin EP receptor agonists on febrile and adrenocortical responses in the prepubertal pig. *Brain Res. Bull.* **41(2)**, 97-103 (1996).
2. Lippmann, W. Inhibition of gastric acid secretion and ulcer formation in the rat by orally-administered 11-deoxyprostaglandin analogues: 15-Hydroxy-16,16-dimethyl-9-oxoprost-5,13-dienoic acids. *Prostaglandins* **7(3)**, 231-246 (1974).
3. Karim, S.M.M., Adaikan, P.G., and Kottegoda, S.R. Prostaglandins and human respiratory tract smooth muscle: Structure activity relationship. *Adv. Prostaglandin Thromboxane Res.* **7**, 969-980 (1980).

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