

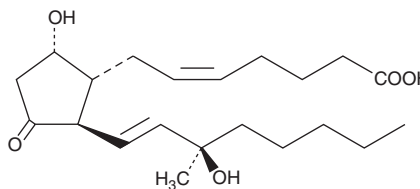
PRODUCT INFORMATION



15(R)-15-methyl Prostaglandin D₂

Item No. 12720

CAS Registry No.: 210978-26-0
Formal Name: 9 α ,15R-dihydroxy-11-oxo-15-methyl-prosta-5Z,13E-dien-1-oic acid
Synonym: 15(R)-15-methyl PGD₂
MF: C₂₁H₃₄O₅
FW: 366.5
Purity: \geq 95%
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

15(R)-15-methyl Prostaglandin D₂ (15(R)-15-methyl PGD₂) 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 15(R)-15-methyl PGD₂ in these solvents is approximately 75, 50, and 100 mg/ml, respectively.

15(R)-15-methyl PGD₂ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 15(R)-15-methyl PGD₂ should be diluted with the aqueous buffer of choice. The solubility of 15(R)-15-methyl PGD₂ in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

15(R)-15-methyl PGD₂ is a metabolically stable synthetic analog of PGD₂ (Item No. 12010). The physiological actions of PGD₂ include regulation of sleep, lowering of body temperature, inhibition of platelet aggregation and relaxation of vascular smooth muscle.¹⁻³ PGD₂ mediates its effects by 2 distinct G-protein-coupled receptors, DP₁ and CRTH2/DP₂.⁴⁻⁶ 15(R)-15-methyl PGD₂ is a potent, selective agonist for the CRTH2/DP₂ receptor.⁷ The EC₅₀ values for eosinophil CD11b expression, actin polymerization, and chemotaxis are 1.4, 3.8, and 1.7 nM, respectively, each of which is approximately 3-5 fold lower than those for PGD₂. In contrast the EC₅₀ for the DP₁-mediated increase in platelet cAMP by 15(R)-15-methyl PGD₂ is $>10 \mu\text{M}$.⁷

References

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3. Giles, H. and Leff, P. The biology and pharmacology of PGD₂. *Prostaglandins* **35(2)**, 277-300 (1988).
4. Boie, Y., Sawyer, N., Slipetz, D.M., et al. Molecular cloning and characterization of the human prostanoid DP receptor. *J. Biol. Chem.* **270(32)**, 18910-18916 (1995).
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6. Hirai, H., Tanaka, K., Yoshie, O., et al. Prostaglandin D₂ selectivity induces chemotaxis in T helper type 2 cells, eosinophils, and basophils via seven-transmembrane receptor CRTH2. *J. Exp. Med.* **193(2)**, 255-261 (2001).
7. Monneret, G., Cossette, C., Gravel, S., et al. 15R-methyl-prostaglandin D₂ is a potent and selective CRTH2/DP₂ receptor agonist in human eosinophils. *J. Pharmacol. Exp. Ther.* **304(1)**, 349-355 (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

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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