

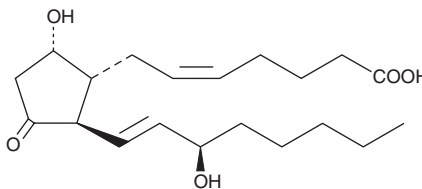
PRODUCT INFORMATION



15(R)-Prostaglandin D₂

Item No. 10118

CAS Registry No.: 59894-05-2
Formal Name: 9 α ,15R-dihydroxy-11-oxo-prosta-5Z,13E-dien-1-oic acid
Synonym: 15(R)-PGD₂
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: \geq 98%
Stability: \geq 1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 15(R)-prostaglandin D₂ (15(R)-PGD₂) be stored as supplied at -20°C. It should be stable for at least one year.

15(R)-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)-PGD₂ 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 15(R)-PGD₂ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 15(R)-PGD₂ in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Many of the effects of PGD₂ are transduced *via* a traditional 7-transmembrane GPCR, the DP₁ receptor.¹ However, in certain leukocytes and other immune cells, a second PGD₂ receptor referred to as the CRTH2 or DP₂ receptor has been cloned and characterized.^{2,3} 15(R)-15-methyl PGD₂ is a surprisingly potent agonist at the DP₂ receptor, being about five times more potent than PGD₂ itself.⁴ 15(R)-PGD₂ has the potential to be produced endogenously as a natural ligand for DP₂, unlike the synthetic 15-methyl analogs. In preliminary reports, 15(R)-PGD₂ has also been reported to be a potent and selective DP₂ receptor agonist.^{5,6}

References

1. Boie, Y., Sawyer, N., Slipetz, D.M., *et al.* *J. Biol. Chem.* **270**, 18910-18916 (1995).
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3. Hirai, H., Tanaka, K., Yoshie, O., *et al.* *J. Exp. Med.* **193**(2), 255-261 (2001).
4. Monneret, G., Cossette, C., Gravel, S., *et al.* *J. Pharmacol. Exp. Ther.* **304**(1), 349-355 (2003).
5. Kim, S., Bellone, S., Maxey, K.M., *et al.* *Bioorganic & Medicinal Chemistry Letters* **15**, 1873-1876 (2005).
6. Cossette, C., Walsh, S.E., Kim, S., *et al.* *J. Pharmacol. Exp. Ther.* **320**(1), 173-179 (2007).

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.

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