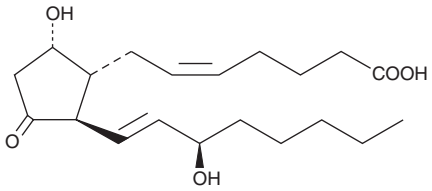
PRODUCT INFORMATION

15(R)-Prostaglandin D_2

Item No. 10118

CAS Registry No.: 59894-05-2
Formal Name: 9α,15R-dihydroxy-11-oxo-prosta-5Z,13E-dien-1-oic acid
Synonym: 15(R)-PGD_2
MF: $C_{20}H_{32}O_5$
FW: 352.5
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

15(R)-Prostaglandin D_2 (15(R)-PGD_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 15(R)-PGD_2 in these solvents is approximately 50 mg/ml.

15(R)-PGD_2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 15(R)-PGD_2 should be diluted with the aqueous buffer of choice. The solubility of 15(R)-PGD_2 in PBS (pH 7.4) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Many of the effects of PGD_2 are transduced *via* a traditional 7-transmembrane GPCR, the DP_1 receptor.[1] However, in certain leukocytes and other immune cells, a second PGD_2 receptor referred to as the CRTH2 or DP_2 receptor has been cloned and characterized.[2,3] 15(R)-15-methyl PGD_2 is a suprisingly potent agonist at the DP_2 receptor, being about five times more potent than PGD_2 itself.[4] 15(R)-PGD_2 has the potential to be produced endogenously as a natural ligand for DP_2, unlike the synthetic 15-methyl analogs. In preliminary reports, 15(R)-PGD_2 has also been reported to be a potent and selective DP_2 receptor agonist.[5,6]

References

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2. Abe, H., Takeshita, T., Nagata, K., *et al. Gene* **227(1)**, 71-77 (1999).
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. Biooganic & Medicinal Chemistry Letters* **15(7)**, 1873-1876 (2005).
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