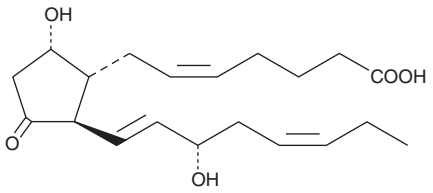
PRODUCT INFORMATION

Prostaglandin D_3

Item No. 12990

CAS Registry No.: 71902-47-1
Formal Name: 9α,15S-dihydroxy-11-oxo-prosta-5Z,13E,17Z-trien-1-oic acid
Synonym: PGD_3
MF: $C_{20}H_{30}O_5$
FW: 350.5
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

Prostaglandin D_3 (PGD_3) 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 PGD_3 in these solvents is approximately 75, 50, and 100 mg/ml, respectively.

PGD_3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of PGD_3 should be diluted with the aqueous buffer of choice. The solubility of PGD_3 in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGD_3 is produced by the metabolism of EPA *via* the cyclooxygenase pathway.[1] PGD_3 is equipotent to PGD_2 (Item No. 12010) in decreasing systemic blood pressure in rats and in decreasing intraocular pressure in rabbits.[2-4] However, it is three to five times more potent than PGD_2 in the inhibition of ADP-induced human platelet aggregation.[2]

References

1. Kulkarni, P.S., Kaufman, P.L., and Srinivasan, B.D. Eicosapentaenoic acid metabolism in cynomolgus and rhesus conjunctiva and eyelid. *J. Ocul. Pharmacol.* **3(4)**, 349-356 (1987).
2. Bundy, G.L., Morton, D.R., Peterson, D.C., *et al.* Synthesis and platelet aggregation inhibiting activity of prostaglandin D analogues. *J. Med. Chem.* **26(6)**, 790-799 (1983).
3. Goh, Y., Nakajima, M., Azuma, I., *et al.* Effects of prostaglandin D_2 and its analogues on intraocular pressure in rabbits. *Jpn. J. Ophthamol.* **32(4)**, 471-480 (1988).
4. Kulkarni, P.S. and Srinivasan, B.D. Prostaglandins E_3 and D_3 lower intraocular pressure. *Invest. Ophthamol. Vis. Sci.* **26(8)**, 1178-1182 (1985).

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