

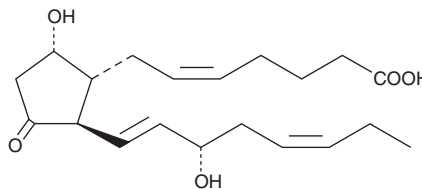
# PRODUCT INFORMATION



## Prostaglandin D<sub>3</sub>

Item No. 12990

**CAS Registry No.:** 71902-47-1  
**Formal Name:** 9 $\alpha$ ,15S-dihydroxy-11-oxo-prosta-5Z,13E,17Z-trien-1-oic acid  
**Synonym:** PGD<sub>3</sub>  
**MF:** C<sub>20</sub>H<sub>30</sub>O<sub>5</sub>  
**FW:** 350.5  
**Purity:**  $\geq$ 98%  
**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

Prostaglandin D<sub>3</sub> (PGD<sub>3</sub>) 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<sub>3</sub> in these solvents is approximately 75, 50, and 100 mg/ml, respectively.

PGD<sub>3</sub> is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of PGD<sub>3</sub> should be diluted with the aqueous buffer of choice. The solubility of PGD<sub>3</sub> 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<sub>3</sub> is produced by the metabolism of EPA via the cyclooxygenase pathway.<sup>1</sup> PGD<sub>3</sub> is equipotent to PGD<sub>2</sub> (Item No. 12010) in decreasing systemic blood pressure in rats and in decreasing intraocular pressure in rabbits.<sup>2-4</sup> However, it is three to five times more potent than PGD<sub>2</sub> in the inhibition of ADP-induced human platelet aggregation.<sup>2</sup>

### 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<sub>2</sub> and its analogues on intraocular pressure in rabbits. *Jpn. J. Ophthalmol.* **32(4)**, 471-480 (1988).
4. Kulkarni, P.S. and Srinivasan, B.D. Prostaglandins E<sub>3</sub> and D<sub>3</sub> lower intraocular pressure. *Invest. Ophthalmol. Vis. Sci.* **26(8)**, 1178-1182 (1985).

#### 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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