

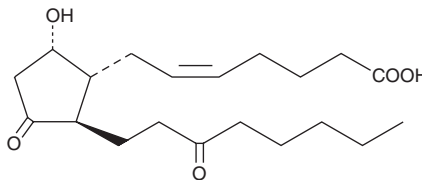
# PRODUCT INFORMATION



## 13,14-dihydro-15-keto Prostaglandin D<sub>2</sub>

Item No. 12610

**CAS Registry No.:** 59894-07-4  
**Formal Name:** 9 $\alpha$ -hydroxy-11,15-dioxo-prost-5Z-en-1-oic acid  
**Synonym:** 13,14-dihydro-15-keto PGD<sub>2</sub>  
**MF:** C<sub>20</sub>H<sub>32</sub>O<sub>5</sub>  
**FW:** 352.5  
**Purity:**  $\geq$ 95%  
**Stability:**  $\geq$ 1 year at -80°C  
**Supplied as:** A solution in methyl acetate



### Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro-15-keto prostaglandin D<sub>2</sub> (13,14-dihydro-15-keto PGD<sub>2</sub>) be stored as supplied at -80°C. It should be stable for at least one year.

13,14-dihydro-15-keto PGD<sub>2</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, or dimethyl formamide purged with an inert gas can be used. The solubility of 13,14-dihydro-15-keto PGD<sub>2</sub> in these solvents is approximately 30 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 aqueous solution of 13,14-dihydro-15-keto PGD<sub>2</sub> is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 13,14-dihydro-15-keto PGD<sub>2</sub> in PBS (pH 7.2) is approximately 2.5 mg/ml. Store aqueous solutions of 13,14-dihydro-15-keto PGD<sub>2</sub> on ice and use within 12 hours of preparation.

### Description

13,14-dihydro-15-keto PGD<sub>2</sub> is a metabolite of PGD<sub>2</sub> (Item No. 12010) which is formed through the 15-hydroxy PGDH pathway. 13,14-dihydro-15-keto PGD<sub>2</sub> was recently identified as a selective agonist for the CRTH2/DP<sub>2</sub> receptor.<sup>1</sup> It also inhibits ion flux in a canine colonic mucosa preparation.<sup>2</sup> In humans, 13,14-dihydro-15-keto PGD<sub>2</sub> is further metabolized to give 11 $\beta$ -hydroxy compounds which have also undergone  $\beta$ -oxidation of one or both side chains. Virtually no 13,14-dihydro-15-keto PGD<sub>2</sub> survives intact in the urine.<sup>3,4</sup>

### References

1. Hirai, H., Tanaka, K., Yoshie, O., *et al.* Prostaglandin D<sub>2</sub> 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).
2. Rangachari, P.K. and Betti, P.-A. Biological activity of metabolites of PGD<sub>2</sub> on canine proximal colon. *Am. J. Physiol.* **264**, G886-G894 (1993).
3. Liston, T.E. and Roberts, L.J., II Metabolic fate of radiolabeled prostaglandin D<sub>2</sub> in a normal human male volunteer. *J. Biol. Chem.* **260**, 13172-13180 (1985).
4. Morrow, J.D., Prakash, C., Awad, J.A., *et al.* Quantification of the major urinary metabolite of prostaglandin D<sub>2</sub> by a stable isotope dilution mass spectrometric assay. *Anal. Biochem.* **193**, 142-148 (1991).

#### 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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