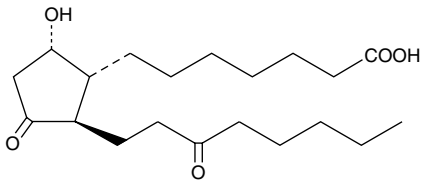
Product Information

13,14-dihydro-15-keto Prostaglandin D_1

Item No. 10010425

CAS Registry No.: 1392219-79-2
Formal Name: 9α-hydroxy-11,15-dioxo-prost-1-oic acid
Synonym: 13,14-dihydro-15-keto PGD_1
MF: 354.5
FW: $C_{20}H_{34}O_5$
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that 13,14-dihydro-15-keto prostaglandin D_1 (13,14-dihydro-15-keto PGD_1) be stored as supplied at -20°C. It should be stable for at least one year.

13,14-dihydro-15-keto PGD_1 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 (DMF) purged with an inert gas can be used. The solubility of 13,14-dihydro-15-keto PGD_1 in ethanol and DMF is approximately 50 mg/ml and approximately 30 mg/ml in DMSO.

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 13,14-dihydro-15-keto PGD_1 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_1 in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

PGD_1 is the theoretical D-series metabolite of dihomo-γ-linolenic acid (DGLA), but to date it has not been isolated as a natural product. It is an inhibitor of ADP-induced platelet aggregation in humans with an IC_{50} value of 320 ng/ml, about 1/10 as potent as PGD_2.[1] 13,14-dihydro-15-keto PGD_1 is the theoretical metabolite of PGD_1 *via* the 15-hydroxy PG dehydrogenase metabolic pathway. No biological studies for this compound have been reported.

Reference

1. 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**, 790-799 (1983).

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