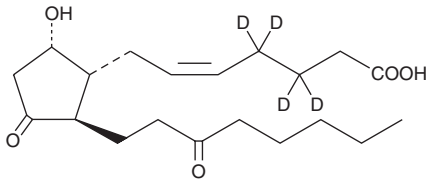
PRODUCT INFORMATION

13,14-dihydro-15-keto Prostaglandin D_2-d_4

Item No. 10007978

Formal Name: 9α-hydroxy-11,15-dioxo-prost-5Z-en-1-oic-3,3,4,4-d_4 acid
Synonym: 13,14-dihydro-15-keto PGD_2-d_4
MF: $C_{20}H_{28}D_4O_5$
FW: 356.5
Chemical Purity: ≥95% 13,14-dihydro-15-keto PGD_2-d_4
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
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

13,14-dihydro-15-keto Prostaglandin D_2-d_4 (13,14-dihydro-15-keto PGD_2-d_4) is intended for use as an internal standard for the quantification of 13,14-dihydro-15-keto PGD_2 (Item No. 12610) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

13,14-dihydro-15-keto PGD_2-d_4 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 13,14-dihydro-15-keto PGD_2-d_4 in these solvents is at least 50 mg/ml.

Description

13,14-dihydro-15-keto PGD_2 is a metabolite of PGD_2 which is formed through the 15-hydroxy PGDH pathway. 13,14-dihydro-15-keto PGD_2 was recently identified as a selective agonist for the CRTH2/DP_2 receptor.[1] It also inhibits ion flux in a canine colonic mucosa preparation.[2] In humans, 13,14-dihydro-15-keto PGD_2 is further metabolized to give 11β-hydroxy compounds which have also undergone β-oxidation of one or both side chains. Virtually no 13,14-dihydro-15-keto PGD_2 survives intact in the urine.[3,4]

References

1. Rangachari, P.K. and Betti, P.-A. Biological activity of metabolites of PGD_2 on canine proximal colon. *Am. J. Physiol.* **264**, G886-G894 (1993).
2. Hirai, H., Tanaka, K., Yoshie, O., *et al.* Prostaglandin D_2 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).
3. Liston, T.E. and Roberts, L.J., II Metabolic fate of radiolabeled prostaglandin D_2 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_2 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.

WARRANTY AND LIMITATION OF REMEDY
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