

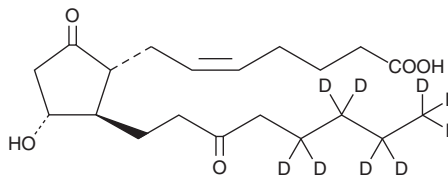
PRODUCT INFORMATION



13,14-dihydro-15-keto Prostaglandin E₂-d₉

Item No. 19348

CAS Registry No.: 2750534-81-5
Formal Name: (Z)-7-((1R,2R,3R)-3-hydroxy-5-oxo-2-(3-oxooctyl-5,5,6,6,7,7,8,8,8-d₉)cyclopentyl)hept-5-enoic acid
Synonyms: 13,14-dihydro-15-keto PGE₂-d₉, 13,14-dihydro-oxo-PGE₂-d₉, PGEM-d₉
MF: C₂₀H₂₃D₉O₅
FW: 361.5
Chemical Purity: ≥98% (13,14-dihydro-15-keto PGE₂)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₉); ≤1% d₀
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 E₂-d₉ (13,14-dihydro-15-keto PGE₂-d₉) is intended for use as an internal standard for the quantification of 13,14-dihydro-15-keto PGE₂ (Item No. 14650) 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 PGE₂-d₉ 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 PGE₂-d₉ in these solvents is approximately 50 mg/ml.

Description

13,14-dihydro-15-keto-Prostaglandin E₂-d₉ (13,14-dihydro-15-keto PGE₂-d₉) is intended for use as an internal standard for the quantification of 13,14-dihydro-15-keto PGE₂ (Item No. 14650) by GC- or LC-MS. 13,14-dihydro-15-keto PGE₂ is a metabolite of PGE₂ (Item No. 14010) and the primary PGE₂ metabolite in plasma.^{1,2} It is formed from PGE₂ via a 15-keto PGE₂ intermediate by 15-oxo-PG Δ¹³ reductase.¹ Unlike PGE₂, 13,14-dihydro-15-keto PGE₂ does not bind effectively to the PGE₂ receptors EP₂ and EP₄ expressed in CHO cells (K_is = 12 and 57 μM, respectively) or induce adenylate cyclase activity in the same cells (EC₅₀s = >18 and >38 μM, respectively). Levels of 13,14-dihydro-15-keto PGE₂ are increased in the plasma of women in the third trimester of pregnancy and in women during and immediately after labor and delivery.³ Levels of 13,14-dihydro-15-keto PGE₂ levels are decreased in tumor tissue compared to adjacent non-cancerous tissue isolated from patients with non-small cell lung cancer (NSCLC).⁴

References

1. Hamberg, M., and Samuelsson, B. *J. Biol. Chem.* **246**(22), 6713-6721 (1971).
2. Nishigaki, N., Negishi, M., and Ichikawa, A. *Mol. Pharmacol.* **50**(4), 1031-1037 (1996).
3. Husslein, P. and Sinzinger, H. *Br. J. Obstet. Gynaecol.* **91**(3), 228-231 (1984).
4. Hughes, D., Otani, T., Yang, P., et al. *Cancer Prev. Res. (Phila)* **1**(4), 241-249 (2008).

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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