

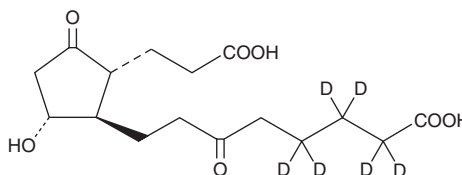
PRODUCT INFORMATION



tetranor-PGEM-d₆

Item No. 314840

CAS Registry No.: 1240398-16-6
Formal Name: (1R,2R,5R)-2-(2-carboxyethyl)-5-hydroxy-ε,3-dioxo-cyclopentanoctanoic-α,α,β,γ,γ-d₆ acid
Synonym: tetranor-Prostaglandin E Metabolite-d₆
MF: C₁₆H₁₈D₆O₇
FW: 334.4
Chemical Purity: ≥98% (tetranor-PGEM)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A solution in methyl acetate
Storage: -80°C
Stability: ≥6 months



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

tetranor-Prostaglandin E metabolite-d₆ (tetranor-PGEM-d₆) is intended for use as an internal standard for the quantification of tetranor-PGEM (Item No. 14840) 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).

tetranor-PGEM-d₆ 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 DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of tetranor-PGEM-d₆ in these solvents is approximately 50 mg/ml.

Description

tetranor-PGEM is the major urinary metabolite of PGE₂ (Item No. 14010).¹ Urine levels of tetranor-PGEM are increased in patients with diabetic nephropathy.² Increased urine levels are also associated with a higher risk of breast cancer in postmenopausal women with a body mass index (BMI) of less than 25 kg/m².³

References

1. Neale, J.R. and Dean, B.J. Liquid chromatography-tandem mass spectrometric quantification of the dehydration product of tetranor PGE-M, the major urinary metabolite of prostaglandin E₂ in human urine. *J. Chromatogr. B Analyt. Technol. Biomed. Life Sci.* **871(1)**, 72-77 (2008).
2. Morita, Y., Kurano, M., Sakai, E., et al. Simultaneous analyses of urinary eicosanoids and related mediators identified tetranor-prostaglandin E metabolite as a novel biomarker of diabetic nephropathy. *J. Lipid Res.* **62**, 100120 (2021).
3. Cui, Y., Shu, X.O., Gao, Y.T., et al. Urinary prostaglandin E₂ metabolite and breast cancer risk. *Cancer Epidemiol. Biomarkers Prev.* **23(12)**, 2866-2873 (2014).

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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