

Product Information



2,3-dinor-6-keto Prostaglandin F_{1α}-d₉ (sodium salt)

Item No. 9000462

Formal Name: 6-oxo-9α,11α,15S-trihydroxy-2,3-dinor-prost-13E-en-1-oic 15,15,16,16,17,17,18,18,18-d₉ acid, sodium salt

Synonym: 2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt)

MF: C₁₈H₂₀D₉O₆ • Na

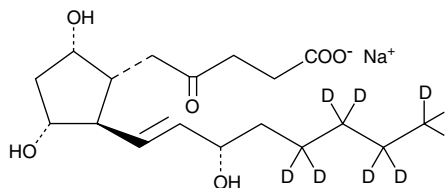
FW: 373.5

Chemical Purity: ≥95%

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₉); ≤1% d₀

Stability: ≥1 year at -20°C

Supplied as: A lyophilized powder



Laboratory Procedures

2,3-dinor-6-keto Prostaglandin F_{1α}-d₉ (sodium salt) (2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt)) contains nine deuterium atoms at the 15, 15', 16, 16', 17, 17', 18, 18, and 18 positions. It is intended for use as an internal standard for the quantification of 2,3-dinor-6-keto PGF_{1α} by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that 2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt) be stored as supplied at -20°C. It should be stable for at least one year.

2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the 2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt). 2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of 2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt) in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

2,3-dinor-6-keto PGF_{1α}-d₉ (sodium salt) is used as an internal standard for the quantification of 2,3-dinor-6-keto PGF_{1α} by stable isotope dilution 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).

2,3-dinor-6-keto PGF_{1α} is the β-oxidation product of 6-keto PGF_{1α} and the major urinary metabolite of PGI₂ in humans.^{1,2} 2,3-dinor-6-keto PGF_{1α} makes up 23% of the recovered radioactivity in urine after administration of labeled 6-keto PGF_{1α} and 20.5% after administration of labeled PGI₂.² In healthy human subjects, the average excreted 2,3-dinor-6-keto PGF_{1α} level is ~100 pg/mg creatinine.³

References

1. Fitzgerald, G.A., Lawson, J., Blair, I.A., *et al.* Analysis of urinary metabolites of thromboxane and prostacyclin by negative-ion chemical-ionization gas chromatography/mass spectrometry. *Adv. Prostaglandin Thromboxane Leukot. Res.* **15**, 87-90 (1985).
2. Rosenkranz, B., Fischer, C., Reimann, I., *et al.* Identification of the major metabolite of prostacyclin and 6-ketoprostaglandin F_{1α} in man. *Biochim. Biophys. Acta* **619**, 207-213 (1980).
3. Wennmalm, Å., Benthin, G., Granström, E.F., *et al.* 2,3-Dinor metabolites of thromboxane A₂ and prostacyclin in urine from healthy human subjects: Diurnal variation and relation to 24h excretion. *Clin. Sci.* **83**, 461-465 (1992).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/9000462

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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