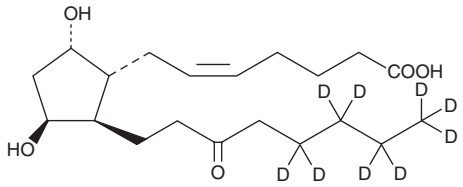
PRODUCT INFORMATION

11β-13,14-dihydro-15-keto Prostaglandin $F_{2\alpha}$-d_9

Item No. 18787

CAS Registry No.:	2738376-88-8
Formal Name:	(Z)-7-((1R,2R,3S,5S)-3,5-dihydroxy-2-(3-oxooctyl-5,5,6,6,7,7,8,8,8-d_9)cyclopentyl) hept-5-enoic acid
Synonyms:	11β-13,14-dihydro-15-keto $PGF_{2\alpha}$-d_9, 11-*epi* 13,14-dihydro-15-keto $PGF_{2\alpha}$-d_9
MF:	$C_{20}H_{25}D_9O_5$
FW:	363.5
Chemical Purity:	≥95% (11β-13,14-dihydro-15-keto $PGF_{2\alpha}$)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_9); ≤1% d_0
Supplied as:	A 500 µg/ml solution in methyl acetate
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

11β-13,14-dihydro-15-keto Prostaglandin $F_{2\alpha}$-d_9 (11β-13,14-dihydro-15-keto $PGF_{2\alpha}$-d_9) is intended for use as an internal standard for the quantification of 11β-13,14-dihydro-15-keto $PGF_{2\alpha}$ (Item No. 16540) 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).

11β-13,14-dihydro-15-keto $PGF_{2\alpha}$-d_9 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 11β-13,14-dihydro-15-keto $PGF_{2\alpha}$-d_9 in these solvents is approximately 50 mg/ml.

Description

11β-13,14-dihydro-15-keto $PGF_{2\alpha}$ is a metabolite of prostaglandin D_2 (PGD_2; Item No. 12010) in the 15-hydroxy PGDH pathway.[1,2] Infusion or inhalation of tritiated PGD_2 in normal males results in the appearance of peak levels of both 11β-$PGF_{2\alpha}$, as the immediate product, and 11β-13,14-dihydro-15-keto $PGF_{2\alpha}$ in the plasma within 10 minutes.[1] Homogenates of human lung metabolize PGD_2 first to 11β-$PGF_{2\alpha}$ and then to 11β-15-keto-$PGF_{2\alpha}$ in the presence of NAD^+, but not 11β-13,14-dihydro-15-keto $PGF_{2\alpha}$.[2] Guinea pig liver and kidney homogenates metabolize PGD_2 to 11β-13,14-dihydro-15-keto $PGF_{2\alpha}$, *via* 11β-$PGF_{2\alpha}$, in the presence of NAD^+ and $NADP^+$.[2]

References

1. Robinson, C., Hardy, C.C., and Holgate, S.T. The metabolism of prostaglandin D_2 after inhalation or intravenous infusion in normal men. *Biochim. Biophys. Acta* **963(2)**, 151-161 (1988).
2. Robinson, C., Herbert, C.A., Bedwell, S., *et al.* The metabolism of prostaglandin D_2. Evidence for the sequential conversion by NADPH and NAD^+ dependent pathways. *Biochem. Pharmacol.* **38(19)**, 3267-3271 (1989).

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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