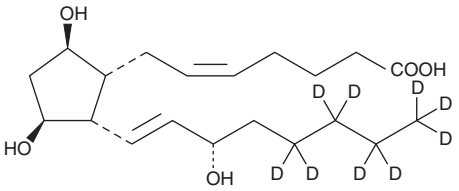
PRODUCT INFORMATION

ent-8-*iso*-15(S)-Prostaglandin F_{2a}-d_9

Item No. 10011720

Formal Name:	9b,11b,15S-trihydroxy-(12b)-prosta-5Z,13E-dien-1-oic acid-17,17,18,18,19,19-d_9 acid
Synonyms:	*ent*-8-*iso*-15-*epi*-PGF_{2a}-d_9, *ent*-15-*epi*-F_{2t}-Isoprostane-d_9
MF:	$C_{20}H_{25}D_9O_5$
FW:	363.5
Chemical Purity:	≥95% *ent*-8-*iso*-15-*epi*-Prostaglandin F_{2a}
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_9); ≤1% d_0
Supplied as:	A 50 µg/ml solution in acetonitrile
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

ent-8-*iso*-15(R)-Prostaglandin F_{2a}-d_9 (*ent*-8-*iso*-15(S)-PGF_{2a}-d_9) is intended for use as an internal standard for the quantification of *ent*-8-*iso*-15(S)-PGF_{2a} (Item No. 10010380) 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).

ent-8-*iso*-15(S)-PGF_{2a}-d_9 is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile 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 acetonitrile in these solvents is approximately 100 mg/ml.

Description

Isoprostanes are produced by the non-enzymatic, free radical peroxidation of phospholipid-esterified arachidonic acid. They have been used as biomarkers of oxidative stress, but they also have been found to have potent biological activity. *ent*-8-*iso*-15(S)-PGF_{2a} is a potent vasoconstrictor of porcine retinal and brain microvessels with EC_{50} values of 15 and 24 nM, respectively.[1] This isoprostane is about ten-fold more potent than 8-*iso*-PGF_{2a} in a whole blood platelet aggregation inhibition assay.[2]

References

1. Hou, X., Robers, L.J.II., Gobeil, F., Jr., *et al.* Isomer-specific contractile effects of a series of synthetic F_2-isoprostanes on retinal and cerebral microvasculature. *Free Radic. Biol. Med.* **36(2)**, 163-172 (2004).
2. Shizuka, M. and Snapper, M.L. Selective synthesis of *ent*-15-*epi*-F_{2t}-isoprostane and a deuterated derivative. *Synthesis* **15**, 2397-2403 (2007).

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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