

# PRODUCT INFORMATION



## *ent*-8-*iso*-15(S)-Prostaglandin F<sub>2a</sub>-d<sub>9</sub> Item No. 10011720

**Formal Name:** 9b,11b,15S-trihydroxy-(12b)-prosta-5Z,13E-dien-1-oic acid-17,17,18,18,19,19-d<sub>9</sub> acid

**Synonyms:** *ent*-8-*iso*-15-*epi*-PGF<sub>2a</sub>-d<sub>9</sub>,  
*ent*-15-*epi*-F<sub>2t</sub>-Isoprostane-d<sub>9</sub>

**MF:** C<sub>20</sub>H<sub>25</sub>D<sub>9</sub>O<sub>5</sub>

**FW:** 363.5

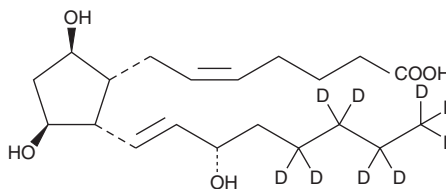
**Chemical Purity:** ≥95% *ent*-8-*iso*-15-*epi*-Prostaglandin F<sub>2a</sub>

**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>9</sub>); ≤1% d<sub>0</sub>

**Supplied as:** A solution in acetonitrile

**Storage:** -20°C

**Stability:** ≥1 year



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<sub>2a</sub>-d<sub>9</sub> (*epi*-8-*iso*-15(S)-PGF<sub>2a</sub>-d<sub>9</sub>) is intended for use as an internal standard for the quantification of *ent*-8-*iso*-15(S)-PGF<sub>2a</sub> (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<sub>2a</sub>-d<sub>9</sub> 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<sub>2a</sub> is a potent vasoconstrictor of porcine retinal and brain microvessels with EC<sub>50</sub> values of 15 and 24 nM, respectively.<sup>1</sup> This isoprostane is about ten-fold more potent than 8-*iso*-PGF<sub>2a</sub> in a whole blood platelet aggregation inhibition assay.<sup>2</sup>

### References

- Hou, X., Robers, L.J.II., Gobeil, F., Jr., *et al.* Isomer-specific contractile effects of a series of synthetic F<sub>2</sub>-isoprostanes on retinal and cerebral microvasculature. *Free Radic. Biol. Med.* **36(2)**, 163-172 (2004).
- Shizuka, M. and Snapper, M.L. Selective synthesis of *ent*-15-*epi*-F<sub>2t</sub>-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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/07/2021

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM