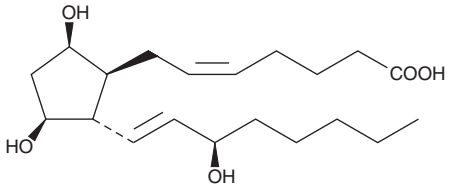
PRODUCT INFORMATION

ent-Prostaglandin $F_{2\alpha}$

Item No. 10008122

CAS No.:	54483-31-7
Formal Name:	9β,11β,15R-trihydroxy-(8β,12α)-prosta-5Z,13E-dien-1-oic acid
Synonyms:	*ent*-$PGF_{2\alpha}$; (-)-Prostaglandin $F_{2\alpha}$
MF:	$C_{20}H_{34}O_5$
FW:	354.5
Purity:	≥98%
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

ent-$PGF_{2\alpha}$ 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 *ent*-$PGF_{2\alpha}$ in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of *ent*-$PGF_{2\alpha}$ is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of *ent*-$PGF_{2\alpha}$ in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Enzymatically-derived prostaglandin $F_{2\alpha}$ ($PGF_{2\alpha}$) is an optically pure compound whereas $PGF_{2\alpha}$ derived from the free radical-catalyzed peroxidation of arachidonate is a racemic mixture. *Ent*-$PGF_{2\alpha}$ is the opposite enantiomer of $PGF_{2\alpha}$. This compound can only be generated *via* the isoprostane pathway of free radical-catalyzed lipid peroxidation and has been implicated as a marker of oxidative stress. Levels of *ent*-$PGF_{2\alpha}$ are elevated in human urine from heavy cigarette smokers and patients with hypercholesterolemia.[1]

References

1. Yin, H., Gao, L., Tai, H.H., *et al.* Urinary prostaglandin $F_{2\alpha}$ is generated from the isoprostane pathway and not the cyclooxygenase in humans. **J. Bio. Chem**. 282(1), 329-336 (2007).

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