### 13,14-dihydro-16,16-difluoro Prostaglandin F$_{2\alpha}$

**Item No. 13609**

**Formal Name:** 9α,11α,15S-trihydroxy-16,16-difluoro-prosta-5Z,16E-dien-1-oic acid  

**Synonym:** 13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$  

**MF:** C$_{20}$H$_{34}$F$_2$O$_5$  

**FW:** 392.5  

**Purity:** ≥95%  

**Stability:** ≥1 year at -20°C  

**Supplied as:** A solution in methyl acetate

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**Laboratory Procedures**

For long term storage, we suggest that 13,14-dihydro-16,16-difluoro prostaglandin F$_{2\alpha}$ (13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$) be stored as supplied at -20°C. It should be stable for at least one year.

13,14-dihydro-16,16-difluoro 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 13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$ in these solvents is approximately 10 mg/ml.

13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the methyl acetate solution of 13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$ should be diluted with the aqueous buffer of choice. 13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$ has a solubility of approximately 0.1 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

PGF$_{2\alpha}$ causes contraction of vascular, bronchial, intestinal, and myometrial smooth muscle, and also exhibits potent luteolytic activity.\(^1\)\(^,\)\(^2\) 13,14-dihydro-16,16-difluoro PGF$_{2\alpha}$ is an analog of PGF$_{2\alpha}$. While its biological activities have not been evaluated, it should be noted that the addition of two electron-withdrawing fluorine atoms has been used to stabilize prostanoids and significantly delay degradation in vivo.\(^3\) Importantly, 13,14-dihydro PGE$_1$ has activity that is comparable to that of PGE$_1$, suggesting that this analog of PGF$_{2\alpha}$ could be biologically active.\(^4\)\(^,\)\(^5\)

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**References**


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**Related Products**

For a list of related products please visit: [www.caymanchem.com/catalog/13609](http://www.caymanchem.com/catalog/13609)

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**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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