

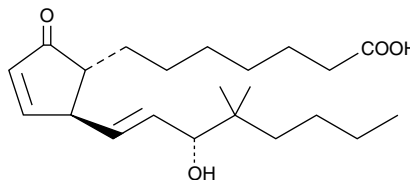
Product Information



16,16-dimethyl Prostaglandin A₁

Item No. 10080

CAS Registry No.: 41692-24-4
Formal Name: 9-oxo-15R-hydroxy-16,16-dimethylprosta-10,13E-dien-1-oic acid
MF: C₂₂H₃₆O₄
FW: 364.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate
UV/Vis.: λ_{max}: 216 nm



Laboratory Procedures

16,16-dimethyl Prostaglandin A₁ (16,16-dimethyl PGA₁) is a metabolism resistant analog of PGA₁. For long term storage, we suggest that 16,16-dimethyl PGA₁ be stored as supplied at -20°C. It should be stable for at least one year.

16,16-dimethyl PGA₁ 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 DMSO, dimethyl formamide, or ethanol purged with an inert gas can be used. The solubility of 16,16-dimethyl PGA₁ in these solvents is approximately 50 mg/ml. 16,16-dimethyl PGA₁ is stable for at least six months in these solvents if stored at -20°C

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. Organic solvent-free solutions of 16,16-dimethyl PGA₁ can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of 16,16-dimethyl PGA₁ in PBS (pH 7.2) is approximately 2 mg/ml. Avoid adding 16,16-dimethyl PGA₁ to basic solutions (pH >7.4) as base treatment will convert 16,16-dimethyl PGA₁ into 16,16-dimethyl PGB₁. We do not recommend storing the aqueous solution for more than one day.

In vitro, 16,16-dimethyl PGA₁ inhibits the viral replication in both HSV and HIV-1 infection systems at concentrations that do not adversely alter cellular DNA synthesis. The ID₅₀ value for HSV-1 strains in Vero cells and human foreskin fibroblasts are 3.8-5.6 µg/ml and 4.6-7.3 µg/ml, respectively. The ID₅₀ value for T cells acutely infected with HIV-1 is 2.5 µg/ml.¹

Reference

1. Hughes-Fulford, M., McGrath, M.S., Hanks, D., *et al.* Effects of dimethyl prostaglandin A₁ on herpes simplex virus and human immunodeficiency virus replication. *Antimicrob. Agents Chemother.* **36**, 2253-2258 (1992).

Related Products

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