

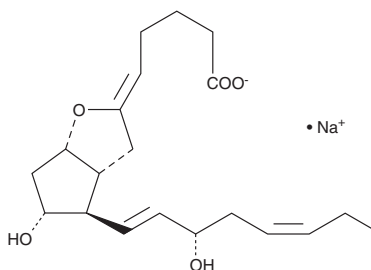
PRODUCT INFORMATION



Prostaglandin I₃ (sodium salt)

Item No. 18300

CAS Registry No.: 68324-96-9
Formal Name: 6,9 α -epoxy-11 α ,15S-dihydroxy-prosta-5Z,13E,17Z-trien-1-oic acid, monosodium salt
Synonym: PGI₃
MF: C₂₀H₂₉O₅ • Na
FW: 372.4
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years
Special Conditions: Hygroscopic



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

Laboratory Procedures

PGI₃ is supplied as a lyophilized powder soluble in water. It is unstable at neutral or acidic pH. On exposure to open air, the compound will absorb moisture and hydrolyze rapidly to 6-keto PGF_{1 α} . An aqueous stock solution of PGI₃ can be prepared by dissolving the crystalline solid directly in basic buffers (pH >10.2). The solubility of PGI₃ in PBS (pH >10.2) is approximately 10 mg/ml. Solutions of PGI₃ at physiologic pH and room temperature will have a half-life from 1 to 12 minutes depending on buffer concentration.^{1,2}

PGI₃ is a prostacyclin analog. Δ^{17} -2,3-dinor-6-keto Prostaglandin F_{1 α} is the major urinary metabolite of PGI₃.³ Therefore, the measurement of Δ^{17} -2,3-dinor-6-keto Prostaglandin F_{1 α} by GC/MS is used as a marker of the *in vivo* production of PGI₃.³

Description

PGI₃ is synthesized from EPA by COX and PGI synthase. PGI₃ has a short *in vivo* half-life and is hydrolyzed to Δ^{17} -6-keto PGF_{1 α} . The platelet and vascular activity of PGI₃ is equivalent to that of PGI₂.^{3,4}

References

1. Stehle, R.G. Physical chemistry, stability, and handling of prostaglandins E₂, F_{2 α} , D₂ and I₂: A critical summary. *Methods Enzymol.* **86**, 436-459 (1982).
2. Moncada, S. Biology and therapeutic potential of prostacyclin. *Stroke* **14**(2), 157-168 (1983).
3. Mann, N.J., Warrick, G.E., O'Dea, K., *et al.* The effect of linoleic, arachidonic, and eicosapentaenoic acid supplementation of prostacyclin production in rats. *Lipids* **29**(3), 157-162 (1994).
4. Johnson, R.A., Lincoln, F.H., Nidy, E.G., *et al.* Synthesis and characterization of prostacyclin, 6-ketoprostaglandin F_{1 α} , prostaglandin I₁, and prostaglandin I₃. *J. Am. Chem. Soc.* **100**(24), 7690-7704 (1978).

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.

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