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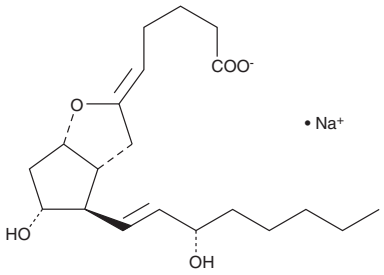
PRODUCT INFORMATION

Prostaglandin I_2 (sodium salt)

Item No. 18220

CAS Registry No.: 61849-14-7
Formal Name: 6,9α-epoxy-11α,15S-dihydroxy-prosta-5Z,13E-dien-1-oic acid, monosodium salt
Synonyms: Epoprostenol, PGI_2, Prostacyclin
MF: $C_{20}H_{31}O_5 \bullet Na$
FW: 374.5
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years
Special Conditions: Hygroscopic



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

Laboratory Procedures

For long term storage, we suggest that prostaglandin I_2 (PGI_2) (sodium salt) be stored as supplied at -20°C. It should be stable for at least two years.

PGI_2 (sodium salt) is a hygroscopic crystalline solid 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 $PGF_{1\alpha}$. An aqueous stock solution of PGI_2 (sodium salt) can be prepared by dissolving the crystalline solid directly in basic buffers (pH >10.2). The solubility of PGI_2 (sodium salt) in PBS (pH >10.2) is approximately 10 mg/ml. Solutions of PGI_2 (sodium salt) at physiologic pH and room temperature will have a half-life from 1 to 12 minutes depending on buffer concentration.[1,2]

Description

PGI_2 is an unstable cyclooxygenase metabolite detected first in vascular endothelial cells.[1,3,4] It elevates platelet cAMP and is a potent vasodilator and inhibitor of human platelet aggregation with an IC_{50} value of 5 nM.[5] PGI_2 is stable in basic buffers (pH = 8), but it is rapidly hydrolyzed to 6-keto $PGF_{1\alpha}$ in neutral or acidic solutions. The half-life is short both *in vivo* and *in vitro*, ranging from 30 seconds to a few minutes. PGI_2 is administered by continuous infusion in humans for the treatment of idiopathic pulmonary hypertension.[6]

References

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