PRODUCT INFORMATION

Prostaglandin E₂
Item No. 14010

CAS Registry No.: 363-24-6
Formal Name: 9-oxo-11α,15S-dihydroxy-prosta-5Z,13E-dien-1-oic acid
Synonyms: Dinoprostone, PGE₂
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

Prostaglandin E₂ (PGE₂) is supplied as a crystalline solid. A stock solution may be made by dissolving the PGE₂ in the solvent of choice. PGE₂ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of PGE₂ in these solvents is >100 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. Organic solvent-free aqueous solutions of PGE₂ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of PGE₂ in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PGE₂ is one of the primary cyclooxygenase products of arachidonic acid (Item No. 90010) and one of the most widely investigated PGs. Its activity influences inflammation, fertility and parturition, gastric mucosal integrity, and immune modulation.¹⁻⁴ The effects of PGE₂ are transduced by at least four distinct receptors designated EP₁, EP₂, EP₃, and EP₄.⁵ Affinity constants (Kᵣ) of PGE₂ for these receptors range from 1-10 nM depending on the receptor subtype and tissue.

References