

Certificate of Analysis

www.tocris.com

Product Name: Prostaglandin E₂

Catalog No.: 2296

Batch No.: 11

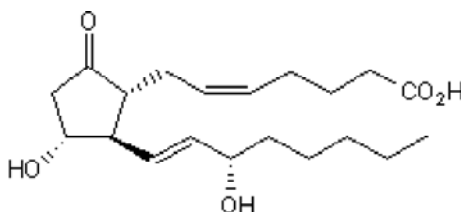
CAS Number: 363-24-6

EC Number: 206-656-6

IUPAC Name: (5Z,11α,13E,15S)-11,15-Dihydroxy-9-oxo-prosta-5,13-dien-1oic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₃₂O₅.
Batch Molecular Weight: 352.47
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 45 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.15	9.15	
Found	68.35	9.11	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Prostaglandin E₂ is an endogenous prostaglandin and primary product of arachidonic acid/cyclooxygenase pathway. Prostaglandin E₂ binds with high affinity to EP₁, EP₂, EP₃ and EP₄ receptors (K_d values range between ~ 1 - 10 nM). Prostaglandin E₂ influences a wide range of processes including inflammation, vasodilation, smooth muscle relaxation, fertility, gastric mucosal integrity and platelet aggregation. Prostaglandin E₂ regulates vertebrate hematopoietic stem cell (HSC) homeostasis, acts as viral transduction enhancer and is tumorigenic in some cancers. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

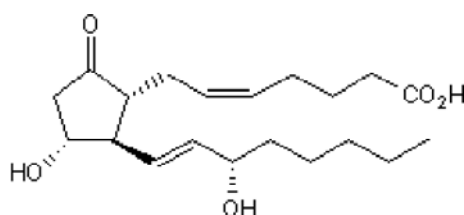
Batch Molecular Formula: C₂₀H₃₂O₅.

Batch Molecular Weight: 352.47

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Heffner et al (2018) Prostaglandin E₂ increases lentiviral vector transduction efficiency of adult human hematopoietic stem and progenitor cells. *Mol. Ther* **26** 320. PMID: 29102562.

Ke et al (2016) Prostaglandin E₂ (PGE₂) promotes proliferation and invasion by enhancing SUMO-1 activity via EP₄ receptor in endometrial cancer. *Tumour Biol.* **37** 12203. PMID: 27230680.

Sato et al (2015) SnapShot: Growing organoids from stem cells. *Cell.* **161** 1700. PMID: 26091044.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 45 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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