Print Date: Jan 22nd 2014

Certificate of Analysis

www.tocris.com

Product Name: **Prostaglandin E_2** **Catalog No.: 2296** **Batch No.: 4**

CAS Number: 363-24-6 EC Number: 206-656-6

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{20}H_{32}O_5$

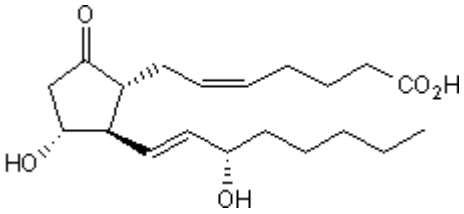
Batch Molecular Weight: 352.47

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 98% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	68.15	9.15	
Found	68.23	9.14	

Product Name: Prostaglandin E_2 **Catalog No.: 2296** **Batch No.: 4**

CAS Number: 363-24-6 EC Number: 206-656-6

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

Description:

Endogenous prostaglandin and primary product of arachidonic acid/cyclooxygenase pathway. Binds with high affinity to EP_1, EP_2, EP_3 and EP_4 receptors (K_d values range between ~ 1 - 10 nM). Influences a wide range of processes including inflammation, smooth muscle relaxation, fertility and gastric mucosal integrity. Regulates vertebrate hematopoietic stem cell (HSC) homeostasis.

Physical and Chemical Properties:

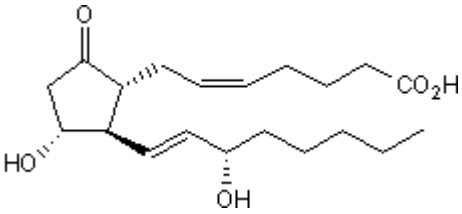
Batch Molecular Formula: $C_{20}H_{32}O_5$

Batch Molecular Weight: 352.47

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



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.

References:

Coleman *et al* (1994) Classification of prostanoid receptors: properties, distribution, and structure of the receptors and their subtypes. Pharmacol.Rev. ***46*** 205. PMID: 7938166.

Hata and Breyer (2004) Pharmacology and signaling of prostaglandin receptors: multiple roles in inflammation and immune modulation. Pharm.Ther. ***103*** 147.

North *et al* (2007) Prostaglandin E2 regulates vertebrate haematopoietic stem cell homeostasis. Nature. ***447*** 1007. PMID: 17581586.