

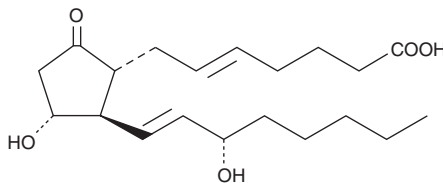
PRODUCT INFORMATION



5-*trans* Prostaglandin E₂

Item No. 14210

CAS Registry No.: 36150-00-2
Formal Name: 11 α ,15S-dihydroxy-9-oxo-prosta-5E,13E-dien-1-oic acid
Synonyms: *trans*-Dinoprostone, 5,6-*trans* PGE₂
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: $\geq 98\%$
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years



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

Laboratory Procedures

5-*trans* Prostaglandin E₂ (5-*trans* PGE₂) is supplied as a crystalline solid. A stock solution may be made by dissolving the 5-*trans* PGE₂ in the solvent of choice, which should be purged with an inert gas. 5-*trans* PGE₂ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 5-*trans* PGE₂ in these solvents is approximately 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 5-*trans* PGE₂ can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 5-*trans* 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

5-*trans* PGE₂ occurs naturally in some gorgonian corals and is a common impurity in commercial lots of PGE₁.¹ It is 18 times more potent than PGE₂ in activating adenylate cyclase in NCB-20 cell homogenates.² 5-*trans* PGE₂ accelerates fibrinolysis by enhancing plasminogen activation mediated by tissue-type plasminogen activator.³ It also inhibits platelet aggregation in human PRP with an IC₅₀ of 180 nM.⁴

References

1. Bundy, G.L., Schneider, W.P., Lincoln, F.H., *et al.* Isolation of a new naturally occurring prostaglandin, 5-*trans*-PGA₂. Synthesis of 5-*trans*-PGE₂ and 5-*trans*-PGF_{2 α} . *J. Am. Chem. Soc.* **94**(6), 2124 (1972).
2. Hensby, C.N. and MacDermot, J. Structure-activity relationships of prostanoids that activate adenylate cyclase of neuronal hybrid cells. *Biochem. Soc. Trans.* **7**(6), 1302-1304 (1979).
3. Shimokawa, M., Urano, T., and Kinoshita, T. *trans*-5-Prostaglandin E₂ stimulates plasminogen activation by tissue-type plasminogen activator. *Biochim. Biophys. Acta* **1137**(3), 317-320 (1992).
4. Kobzar, G., Mardla, V., Järving, I., *et al.* Comparison of the inhibitory effect of E-prostaglandins in human and rabbit platelet-rich plasma and washed platelets. *Comp. Biochem. Physiol.* **106**(2), 489-494 (1993).

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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