

Prostaglandin E2

Catalog Number: C363246



OrganRegen, INC.
Creating Solutions for Organoid Cultures

DESCRIPTION

Background Prostaglandin E2 is a hormone-like substance that participate in a wide range of body functions such as the contraction and relaxation of smooth muscle, the dilation and constriction of blood vessels, control of blood pressure, and modulation of inflammation.

Alias PGE2; 前列腺素 E2; 地诺前列酮

M. W t 352.47

Formula C₂₀H₃₂O₅

CAS No 363-24-6

Storage Powder -20°C 3 years

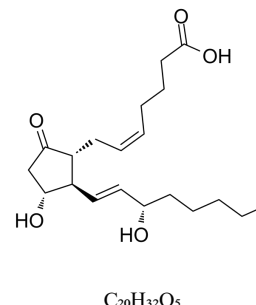
In solvent -80°C 6 months

-20°C 1 month

Solubility DMSO ≥ 100 mg/mL(283.71 mM)

Ethanol 70 mg/mL(198.60 mM)

H₂O < 0.1 mg/mL(insoluble)



BIOLOGICAL ACTIVITY

In Vitro

PGE2 shows inhibition of IL 2 production in the mixture of irradiated and nonirradiated T lymphocytes. PGE2 (0.1-10 μM) dose-dependently inhibits the production of IL 2. PGE2 acts during the inductive phase of activation of suppressor cells. Preincubation of T lymphocytes with PGE2 induces cells that suppress IL 2 production and PHA proliferation^[1].

In Vivo

PGE2 (0.3 μg/k, i.p.) significantly reduces the number of peritoneal macrophages undergoing phagocytosis of the methacrylate microbeads in rats^[2]. PGE2 (0.1 mg/min, i.a.) increases renal blood flow. PGE2 produces a biphasic change in renal vascular resistance, vasodilatation starts at 0.01 mg/min and is maximal at about 3 mg/min, while at the highest dose used (20 mg/min) PGE2 induces renal vasoconstriction^[3].

REFERENCES

- [1]. Chouaib S, et al. The mechanisms of inhibition of human IL 2 production. II. PGE2 induction of suppressor T lymphocytes. *J Immunol.* 1984 Apr;132(4):1851-7.
- [2]. Fernandez-Repollet E, et al. In vivo effects of prostaglandin E2 and arachidonic acid on phagocytosis of fluorescent methacrylate microbeads by rat peritoneal macrophages. *J Histochem Cytochem.* 1982 May;30(5):466-70.
- [3]. Haylor J, et al. Renal vasodilator activity of prostaglandin E2 in the rat anaesthetized with pentobarbitone. *Br J Pharmacol.* 1982 May;76(1):131-7.