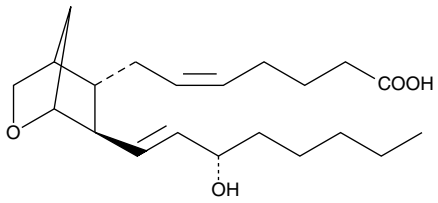
Product Information

U-46619

Item No. 16450

CAS Registry No.: 56985-40-1
Formal Name: 9,11-dideoxy-9α,11α-methanoepoxy-prosta-5Z,13E-dien-1-oic acid
Synonym: 9,11-dideoxy-9α,11α-methanoepoxy Prostaglandin $F_{2\alpha}$
MF: $C_{21}H_{34}O_4$
FW: 350.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

For long term storage, we suggest that U-46619 be stored as supplied at -20°C. It will be stable for at least two years.

U-46619 is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO, ethanol, and dimethyl formamide purged with an inert gas can be used. The solubility of U-46619 in these solvents is aproximately 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. If an organic solvent-free solution of U-46619 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of U-46619 in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

U-46619 is a stable analog of the endoperoxide prostaglandin H_2, and a TP receptor agonist.[1] It exhibits properties similar to thromboxane A_2, causing platelet shape change and aggregation, and contraction of vascular smooth muscle.[2,3] Mean EC_{50} values for shape change in human, rat, and rabbit platelets are 4.8, 6.0, and 7.3 nM respectively, and for aggregation are 82, 145, and 65 nM, respectively.[4]

References

1. Abramovitz, M., Adam, M., Boie, Y., *et al.* The utilization of recombinant prostanoid receptors to determine the affinities and selectivities of prostaglandins and related analogs. *Biochim. Biophys. Acta* **1483**, 285-293 (2000).
2. Coleman, R.A., Humphrey, P.P.A., Kennedy, I., *et al.* Comparison of the actions of U-46619, a prostaglandin H_2-analogue, with those of prostaglandin H_2 and thromboxane A_2 on some isolated smooth muscle preparations. *Br. J. Pharmacol.* **73**, 773-778 (1981).
3. Liel, N., Mais, D.E., and Halushka, P.V. Binding of a thromboxane A_2/prostaglandin H_2 agonist [^{3}H]U46619 to washed human platelets. *Prostaglandins* **33**, 789-797 (1987).
4. Tymkewycz, P.M., Jones, R.L., Wilson, N.H., *et al.* Heterogeneity of thromboxane A_2 (TP-) receptors: Evidence from antagonist but not agonist potency measurements. *Br. J. Pharmacol.* **102**, 607-614 (1991).

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