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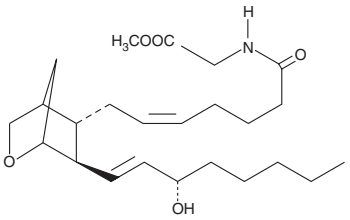
PRODUCT INFORMATION

U-46619 Glycine methyl ester

Item No. 10010522

Formal Name:	9,11-dideoxy-9α,11α-methanoepoxy-prosta-5Z,13E-dien-1-oic acid, methyl ester
MF:	$C_{24}H_{39}NO_5$
FW:	421.6
Purity:	≥98%
Supplied as:	A solution in methyl acetate
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

U-46619 Glycine methyl ester 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 ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of U-46619 glycine methyl ester in ethanol is approximately 50 mg/ml and approximately 30 mg/ml in DMSO and DMF.

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 glycine methyl ester 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 glycine methyl ester in PBS (pH 7.2) is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

U-46619 is a stable analog of the endoperoxide PGH_2, and a TP receptor agonist.[1] It exhibits properties similar to TXA_2, causing platelet shape change, 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] U-46619 glycine methyl ester contains a modification at the C-1 position of U-46619 that may uniquely alter its binding properties to the TP receptor or any of the PGH_2-metabolizing enzymes. As a stable PGH_2 analog, it could therefore be a useful tool to explore the inhibition of various enzymes in the arachidonic acid metabolic pathway. U-46619 glycine methyl ester may also serve as a lipophilic prodrug form of U-46619 that will alter its distribution and pharmacokinetic properties. There are no published reports on the biological activity of U-46619 glycine methyl ester.

References

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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(3)**, 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(6)**, 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(3)**, 607-614 (1991).

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