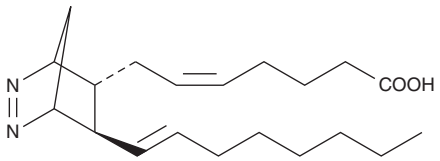
PRODUCT INFORMATION

U-51605

Item No. 16465

CAS Registry No.:	64192-56-9
Formal Name:	9α,11α-azoprosta-5Z,13E-dien-1-oic acid
MF:	$C_{20}H_{32}N_2O_2$
FW:	332.5
Purity:	≥98%
Supplied as:	A solution in methyl acetate
Storage:	-80°C
Stability:	≥2 years



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

Laboratory Procedures

U-51605 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 purged with an inert gas can be used. The solubility of U-51605 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. If an organic solvent-free solution of U-51605 is needed, it can be prepared by evaporating the methyl acetate and directly dissolving the neat oil in aqueous buffers. The solubility of U-51605 in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

U-51605 is a stable analog of the endoperoxide prostaglandin H_2 (PGH_2). It is an inhibitor of both prostacyclin (PGI) and thromboxane (TX) synthases with more selectivity towards PGI synthase. U-51605 is also a partial agonist at TP receptors.[1] In human foreskin fibroblasts, U-51605 inhibits PGI synthase at a concentration of 2.8 µM, whereas, human platelet TX synthase is inhibited at a concentration of 5.6 µM.[2,3] At concentrations up to 1 µM, U-51605 reduced the release of prostacyclin in SHR aorta elicited by the calcium ionophore A-23187 with no effect on TXA_2 production and yet significantly increased PGE_2 and $PGF_{2\alpha}$ release.[4]

References

1. Needleman, P., Bryan, B., Wyche, A., *et al.* Thromboxane synthetase inhibitors as pharmacological tools: Differential biochemical and biological effects on platelet suspensions. *Prostaglandins* **14**, 897-907 (1977).
2. Gorman, R.R., Hamilton, R.D., and Hopkins, N.K. Stimulation of human foreskin fibroblast adenosine 3':5'-cyclic monophosphate levels by prostacyclin (prostaglandin I_2). *J. Biol. Chem.* **254**, 1671-1676 (1979).
3. Gorman, R.R., Bundy, G.L., Peterson, D.C., *et al.* Inhibition of human platelet thromboxane synthetase by 9,11-azoprosta-5,13-dienoic acid. *Proc. Natl. Acad. Sci. USA* **74**, 4007-4011 (1977).
4. Gluais, P., Paysant, J., Badier-Commander, C., *et al.* In SHR aorta, calcium ionophore A-23187 releases prostacyclin and thromboxane A_2 as endothelium-derived contracting factors. *Am. J. Physiol. Heart Circ. Physiol.* **291**, H2255-H2264 (2006).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM