

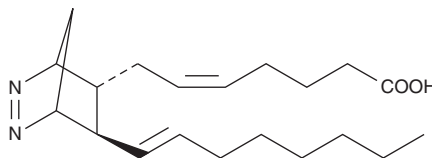
# PRODUCT INFORMATION



**U-51605**

Item No. 16465

**CAS Registry No.:** 64192-56-9  
**Formal Name:** 9 $\alpha$ ,11 $\alpha$ -azoprostano-5Z,13E-dien-1-oic acid  
**MF:** C<sub>20</sub>H<sub>32</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 332.5  
**Purity:**  $\geq$ 98%  
**Supplied as:** A 1 mg/ml solution in methyl acetate  
**Storage:** -80°C  
**Stability:**  $\geq$ 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<sub>2</sub> (PGH<sub>2</sub>). 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.<sup>1</sup> In human foreskin fibroblasts, U-51605 inhibits PGI synthase at a concentration of 2.8  $\mu$ M, whereas, human platelet TX synthase is inhibited at a concentration of 5.6  $\mu$ M.<sup>2,3</sup> At concentrations up to 1  $\mu$ M, U-51605 reduced the release of prostacyclin in SHR aorta elicited by the calcium ionophore A-23187 with no effect on TXA<sub>2</sub> production and yet significantly increased PGE<sub>2</sub> and PGF<sub>2 $\alpha$</sub>  release.<sup>4</sup>

## 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<sub>2</sub>). *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-azoprostano-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<sub>2</sub> as endothelium-derived contracting factors. *Am. J. Physiol. Heart Circ. Physiol.* **291**, H2255-H2264 (2006).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

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## 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](http://WWW.CAYMANCHEM.COM)