

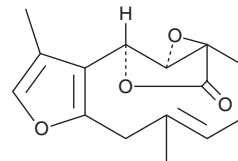
# PRODUCT INFORMATION



## Linderane

Item No. 27479

CAS Registry No.: 13476-25-0  
Formal Name: (1aS,4E,10S,10aS)-3,6,10,10a-tetrahydro-5,9-dimethyl-2H-10,1a-(epoxymethano)oxireno[4,5]cyclodeca[1,2-b]furan-12-one  
MF:  $C_{15}H_{16}O_4$   
FW: 260.3  
Purity:  $\geq 98\%$   
UV/Vis.:  $\lambda_{\max}$ : 213 nm  
Supplied as: A solid  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 2$  years



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

### Laboratory Procedures

Linderane is supplied as a solid. A stock solution may be made by dissolving the linderane in the solvent of choice. Linderane is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of linderane in these solvents is approximately 0.2, 5, and 10 mg/ml, respectively.

Linderane is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, linderane should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Linderane has a solubility of approximately 0.09 mg/ml in a 1:10 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Linderane is a sesquiterpene that has been found in *L. aggregata*.<sup>1,2</sup> It inhibits the cytochrome P450 (CYP) isoform CYP2C9 ( $K_i = 1.26 \mu\text{M}$ ) in an irreversible and NADPH-dependent manner.<sup>1</sup> Linderane decreases phosphoenolpyruvate carboxykinase (*Pck1*) and glucose-6-phosphatase (*G6pc*) gene expression, cAMP concentration, and CREB phosphorylation, increases phosphodiesterase 3 (PDE3) activity, and inhibits gluconeogenesis in rat primary hepatocytes.<sup>2</sup> *In vivo*, linderane (50 mg/kg twice per day) decreases serum and hepatic triglyceride levels, as well as random-fed and fasting blood glucose levels in *ob/ob* mice.

### References

1. Wang, H., Wang, K., Mao, X., *et al.* Mechanism-based inactivation of CYP2C9 by linderane. *Xenobiotica* **45**(12), 1037-1046 (2015).
2. Xie, W., Ye, Y., Feng, Y., *et al.* Linderane suppresses hepatic gluconeogenesis by inhibiting the cAMP/PKA/CREB pathway through indirect activation of PDE 3 via ERK/STAT3. *Front. Pharmacol.* **9**:476, (2018).

#### 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.

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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