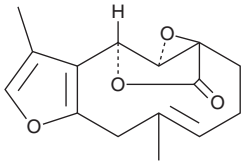
PRODUCT INFORMATION

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: ≥98%
UV/Vis.: λ_{max}: 213 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 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, which should be purged with an inert gas. Linderane is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). 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*.[1,2] It inhibits the cytochrome P450 (CYP) isoform CYP2C9 (K_i = 1.26 µM) in an irreversible and NADPH-dependent manner.[1] 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.[2] *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).

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