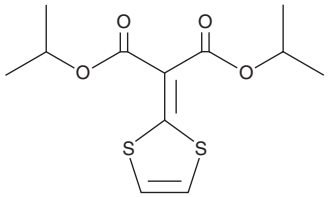
PRODUCT INFORMATION

Malotilate

Item No. 30266

CAS Registry No.: 59937-28-9
Formal Name: 2-(1,3-dithiol-2-ylidene)-propanedioic acid, 1,3-*bis*(1-methylethyl) ester
Synonym: NKK-105
MF: $C_{12}H_{16}O_4S_2$
FW: 288.4
Purity: ≥98%
UV/Vis.: λ_{max}: 223, 362 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

Malotilate is supplied as a solid. A stock solution may be made by dissolving the malotilate in the solvent of choice, which should be purged with an inert gas. Malotilate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of malotilate in these solvents is approximately 25, 10, and 20 mg/ml, respectively.

Malotilate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, malotilate should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Malotilate has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Malotilate is a hepatoprotective agent.[1] It inhibits A23187-induced metabolism of arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) to the 5-lipoxygenase (5-LO) metabolites leukotriene B_4 (LTB_4; Item No. 20110) and 5-HETE in macrophages isolated from the ascitic fluid of patients with alcoholic liver cirrhosis. Malotilate (50 mg/kg) prevents increases in plasma glutamic-pyruvic transaminase (GPT) and glutamic-oxaloacetic transaminase (GOT) activities in a rat model of carbon tetrachloride-induced liver injury.[2] It reduces hepatic deposition of type III procollagen, type IV collagen, laminin, and fibronectin in a rat model of dimethylnitrosamine-induced hepatic fibrosis when administered at a dose of 100 mg/kg.[3]

References

1. Zijlstra, F.J., Wilson, J.H., Vermeer, M.A., *et al.* Differential effects of malotilate on 5-, 12- and 15-lipoxygenase in human ascites cells. *Eur. J. Pharmacol.* **159(3)**, 291-295 (1989).
2. Nokata, M., Katoh, M., and Sugimoto, T. Protective effect of malotilate (Diisopropyl 1,3-dithiol-2-ylidenemalonate) on carbon tetrachloride-induced liver injury in mice and rats. *J. Toxicol. Sci.* **10(4)**, 279-288 (1985).
3. Ryhanen, L., Stenback, F., Ala-Kokko, L., *et al.* The effect of malotilate on type III and type IV collagen, laminin and fibronectin metabolism in dimethylnitrosamine-induced liver fibrosis in the rat. *J. Hepatol.* **24(2)**, 238-245 (1996).

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