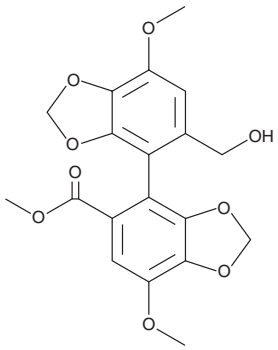
PRODUCT INFORMATION

Bicyclol

Item No. 21551



CAS Registry No.:	118159-48-1
Formal Name:	5'-(hydroxymethyl)-7,7'-dimethoxy-[4,4'-bi-1,3-benzodioxole]-5-carboxylic acid, methyl ester
MF:	$C_{19}H_{18}O_9$
FW:	390.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 211, 228, 273 nm
Supplied as:	A crystalline 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

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

Bicyclol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, bicyclol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Bicyclol has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Bicyclol is a hepatoprotective agent.[1-4] It has antiviral activity against hepatitis B (HBV), reducing viral DNA and the secretion of the HBV antigens HBsAg and HBeAg by 59 and 35%, respectively, in infected 2.2.15 HepG2 cells.[1] *In vivo*, bicyclol reduces duck HBV (DHBV) DNA in DHBV-infected ducks at doses ≥0.4 g/kg. It also reduces the expression of TNF-α and the accumulation of lymphocytes in the liver in a mouse model of liver injury induced by concanavalin A (Item No. 14951).[2] Oral administration of bicyclol prior to injection of diethylnitrosamine (DEN) and phenobarbital (PB; Item Nos. 9001494 | 20987) prevents formation of DEN/PB-induced hepatocellular carcinomas.[3] It also reduces liver fibrosis in a rat model of bile duct ligation-induced hepatic fibrosis.[4]

References

1. Liu, G.T. Bicyclol: A novel drug for treating chronic viral hepatitis B and C. *Med. Chem.* **5(1)**, 29-43 (2009).
2. Li, M. and Liu, G.T. Inhibition of Fas/FasL mRNA expression and TNF-α release in concanavalin A-induced liver injury in mice by bicyclol. *World J. Gastroenterol.* **10(12)**, 1775-1790 (2004).
3. Yu, L., Wei, H., and Liu, G. A novel antihepatitis drug, bicyclol, prevents liver carcinogenesis in diethylnitrosamine-initiated and phenobarbital-promoted mice tumor model. *J. Biomed. Biotechnol.* (2012).
4. Zhen, Y.Z., Li, N.R., He, H.W., *et al*. Protective effect of bicyclol against bile duct ligation-induced hepatic fibrosis in rats. *World J. Gastroenterol.* **21(23)**, 7155-7164 (2015).

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