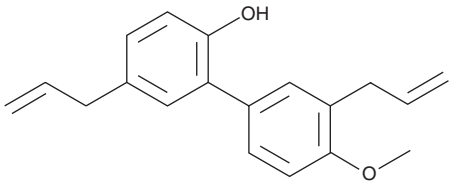
PRODUCT INFORMATION

4'-O-Methylhonokiol

Item No. 11089

CAS Registry No.:	68592-15-4
Formal Name:	4′-methoxy-3′,5-di-2-propen-1-yl-[1,1′-biphenyl]-2-ol
Synonyms:	4-Methoxyhonokiol, NSC 293101
MF:	$C_{19}H_{20}O_2$
FW:	280.4
Purity:	≥95%
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥2 years
Item Origin:	Plant/*Magnolia officinalis*



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

Laboratory Procedures

4'-O-Methylhonokiol is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of 4'-O-methylhonokiol in these solvents is approximately 33 mg/ml.

4'-O-Methylhonokiol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of 4'-O-Methylhonokiol should be diluted with the aqueous buffer of choice. 4'-O-Methylhonokiol has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method.

Description

4'-O-Methylhonokiol is a phenol that has been found in *M. grandiflora* and has diverse biological activities.[1-4] It is active against the bacteria *B. subtilis*, *S. aureus*, and *M. smegmatis* (MIC = 2.5 µg/ml for all) and the fungus *T. mentagrophytes* (MIC = 1.25 µg/ml).[1] 4'-O-Methylhonokiol (10 and 30 µM) inhibits LPS-induced activation of NF-kB and production of nitric oxide (NO) in RAW 264.7 macrophages.[4] *In vivo*, 4'-O-Methylhonokiol (20 and 200 mg/kg) reduces carrageenan-induced paw edema in mice. It reduces neuronal apoptosis and escape latency in the Morris water maze in a mouse model of Alzheimer's disease induced by amyloid-β 1-42 (Aβ42) when administered at a dose of 1 mg/kg.[2] 4-O-methylhonokiol also reduces plasma cholesterol and triglyceride levels, ameliorates hepatic steatosis, and improves insulin resistance in a mouse model of high-fat diet-induced obesity.[3]

References

1. Clark, A.M., El-Feraly, F.S., Li, W.S. *J. Pharm. Sci.* **70(8)**, 951-952 (1981).
2. Lee, J.W., Lee, Y.K., Lee, B.J., *et al. Pharmacol. Biochem. Behav.* **95(1)**, 31-40 (2010).
3. Zhang, Z., Chen, J., Jiang, X., *et al. Oxid. Med. Cell. Longev.* 965954 (2014).
4. Zhou, H.Y., Shin, E.M., Guo, L.Y., *et al. Eur. J. Pharmacol.* **586(1-3)**, 340-349 (2008).

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