

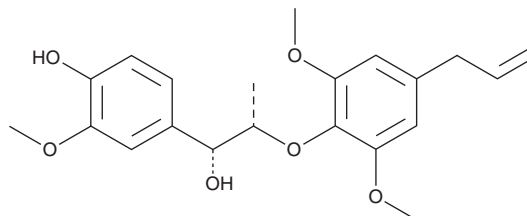
PRODUCT INFORMATION



Myrislignan

Item No. 33759

CAS Registry No.: 171485-39-5
Formal Name: α R-[(1S)-1-[2,6-dimethoxy-4-(2-propen-1-yl)phenoxy]ethyl]-4-hydroxy-3-methoxy-benzenemethanol
MF: $C_{21}H_{26}O_6$
FW: 374.4
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 2 years
Item Origin: Plant/*Myristica fragrans*



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

Laboratory Procedures

Myrislignan is supplied as a solid. A stock solution may be made by dissolving the myrislignan in the solvent of choice, which should be purged with an inert gas. Myrislignan is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of myrislignan in these solvents is approximately 1, 5, and 15 mg/ml, respectively.

Myrislignan is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, myrislignan should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Myrislignan has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Myrislignan is a lignan that has been found in *M. fragrans* and has diverse biological activities.¹⁻⁴ It inhibits hypocotyl or root growth of cress ($\text{IC}_{50}\text{s} = 429$ and $517 \mu\text{M}$, respectively).¹ Myrislignan ($50 \mu\text{g/ml}$) inhibits production of nitric oxide (NO), increases in inducible nitric oxide synthase (iNOS) and COX-2 levels, and release of TNF- α and IL-6 in LPS-stimulated RAW 264.7 cells.² It inhibits the proliferation of, and induces apoptosis in, A549 lung cancer cells.³ Myrislignan (3, 5, and 8 mg/kg) reduces tumor growth in an A549 lung cancer mouse xenograft model. It decreases parasite burden in the liver, brain, and spleen in a mouse model of *T. gondii* infection when administered at a dose of 100 mg/kg.⁴

References

1. Suwitchayanon, P., Suenaga, K., Iwasaki, A., et al. Myrislignan, a growth inhibitor from the roots of citronella grass. *Nat. Prod. Commun.* **12**(7), 1077-1078 (2017).
2. Jin, H., Zhu, Z.-G., Yu, P.-J., et al. Myrislignan attenuates lipopolysaccharide-induced inflammation reaction in murine macrophage cells through inhibition of NF- κ B signalling pathway activation. *Phytother. Res.* **26**(9), 1320-1326 (2012).
3. Lu, X., Yang, L., Chen, J., et al. The action and mechanism of myrislignan on A549 cells in vitro and in vivo. *J. Nat. Med.* **71**(1), 76-85 (2017).
4. Zhang, J., Si, H., Li, B., et al. Myrislignan exhibits activities against *Toxoplasma gondii* RH strain by triggering mitochondrial dysfunction. *Front. Microbiol.* **10**, 2152 (2019).

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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