

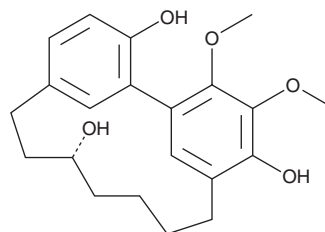
PRODUCT INFORMATION



Myricanol

Item No. 45981

CAS Registry No.: 33606-81-4
Formal Name: (9R)-16,17-dimethoxy-tricyclo[12.3.1.1^{2,6}]nonadeca-1(18),2,4,6(19),14,16-hexaene-3,9,15-triol
Synonyms: (-)-(R)-Myricanol, (R)-Myricanol
MF: C₂₁H₂₆O₅
FW: 358.4
Purity: ≥98%
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

Myricanol is supplied as a solid. A stock solution may be made by dissolving the myricanol in the solvent of choice, which should be purged with an inert gas. Myricanol is sparingly soluble (1-10 mg/ml) in methanol and DMSO.

Description

Myricanol is a cyclic diarylheptanoid that has been found in *M. nagi* and has diverse biological activities.¹⁻⁵ It inhibits the type III secretion system of *S. typhimurium* (IC₅₀ = 41.34 μM) and the invasion of *S. typhimurium* into SW480 cells.¹ Myricanol binds to AMP-activated protein kinase γ (AMPKγ; K_i = 17.15 μM) and peroxiredoxin-5 (Prx5) and decreases lipid accumulation in 3T3-L1 adipocytes.^{2,5} It is an activator of nicotinamide phosphoribosyltransferase (Nampt) and sirtuin 1 (SIRT1) and increases insulin-induced glucose uptake in C2C12 myotubes.^{3,4} Myricanol (50 mg/kg) protects against muscle dysfunction induced by dexamethasone (Item No. 11015) in mice.³

References

1. Wu, Y., Yang, X., Zhang, D., *et al.* Myricanol inhibits the type III secretion system of *Salmonella enterica* serovar Typhimurium by interfering with the DNA-binding activity of HilD. *Front. Microbiol.* **11**, 571217 (2020).
2. Shen, S., Liao, Q., Feng, Y., *et al.* Myricanol mitigates lipid accumulation in 3T3-L1 adipocytes and high fat diet-fed zebrafish via activating AMP-activated protein kinase. *Food Chem.* **270**, 305-314 (2019).
3. Lyu, P., Li, S., Han, Y., *et al.* Affinity-based protein profiling-driven discovery of myricanol as a Nampt activator. *Bioorg. Chem.* **133**, 106435 (2023).
4. Shen, S., Liao, Q., Liu, J., *et al.* Myricanol rescues dexamethasone-induced muscle dysfunction via a sirtuin 1-dependent mechanism. *J. Cachexia Sarcopenia Muscle* **10(2)**, 429-444 (2019).
5. Shen, S., Liao, Q., Lyu, P., *et al.* Myricanol prevents aging-related sarcopenia by rescuing mitochondrial dysfunction via targeting peroxiredoxin 5. *MedComm* (2020) **5(6)**, e566 (2024).

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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