

PRODUCT INFORMATION



Thielavin A

Item No. 21767

CAS Registry No.: 71950-66-8
Formal Name: 4-[(2,4-dihydroxy-3,6-dimethylbenzoyl)oxy]-2-hydroxy-3,5,6-trimethyl-benzoic acid, 4-carboxy-3-hydroxy-2,5,6-trimethylphenyl ester

MF: C₂₉H₃₀O₁₀

FW: 538.5

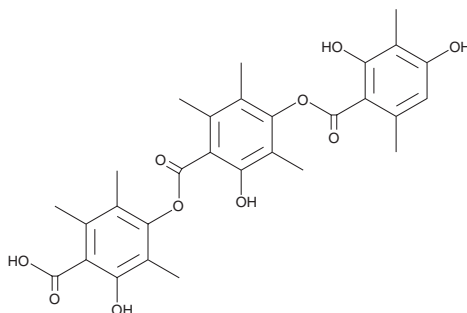
Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Fungus/Unidentified sp.



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

Laboratory Procedures

Thielavin A is supplied as a solid. A stock solution may be made by dissolving the thielavin A in the solvent of choice, which should be purged with an inert gas. Thielavin A is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide.

Description

Thielavin A is a fungal metabolite originally isolated from *T. terricola* that is related to thielavin B (Item No. 18770).¹ Thielavin A inhibits COX, blocking both the conversion of arachidonic acid (Item No. 90010) to prostaglandin H₂ (PGH₂; Item No. 17020) and the conversion of PGH₂ to PGE₂ (Item No. 14010; IC₅₀s = 10 and 40 μM, respectively).² Thielavin A also inhibits glucose-6-phosphatase in rat liver microsomes (IC₅₀ = 4.6 μM).³ It is a non-competitive inhibitor of α-glucosidase from *S. cerevisiae* (IC₅₀ = 23.8 μM; K_i = 27.8 μM).^{4,5}

References

1. Kitahara, N., Haruyama, H., Hata, T., *et al.* The structures of thielavins A, B and C. Prostaglandin synthetase inhibitors from fungi. *J. Antibiot. (Tokyo)* **36**(5), 599-600 (1983).
2. Kitahara, N., Endo, A., Furuya, K., *et al.* Thielavin A and B, new inhibitors of prostaglandin biosynthesis produced by *Thielavia terricola*. *J. Antibiot. (Tokyo)* **34**(12), 1562-1568 (1981).
3. Sakemi, S., Hirai, H., Ichiba, T., *et al.* Thielavins as glucose-6-phosphatase (G6Pase) inhibitors: Producing strain, fermentation, isolation, structural elucidation and biological activities. *J. Antibiot. (Tokyo)* **55**(11), 941-951 (2002).
4. Take, Y., Inouye, Y., and Nakamura, S. Comparative studies of the inhibitory properties of antibiotics on human immunodeficiency virus and avian myeloblastosis virus reverse transcriptases and cellular DNA polymerases. *J. Antibiot. (Tokyo)* **42**(1), 107-115 (1989).
5. Rivera-Chávez, J., González-Andrade, M., González Mdel, C., *et al.* Thielavins A, J and K: α-Glucosidase inhibitors from MEXU 27095, an endophytic fungus from *Hintonia latiflora*. *Phytochemistry* **94**, 198-205 (2013).

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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