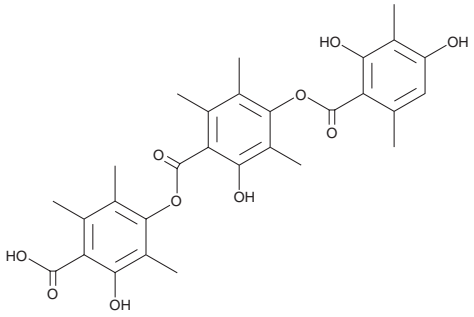
PRODUCT INFORMATION

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:	$C_{29}H_{30}O_{10}$
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 H_2 (PGH_2; Item No. 17020) and the conversion of PGH_2 to PGE_2 (Item No. 14010; IC_{50}s = 10 and 40 µM, respectively).[2] Thielavin A also inhibits glucose-6-phosphatase in rat liver microsomes (IC_{50} = 4.6 µM).[3] It is a non-competitive inhibitor of α-glucosidase from *S. cerevisiae* (IC_{50} = 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM