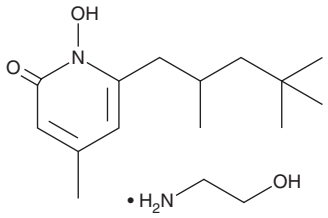
PRODUCT INFORMATION

Piroctone Olamine

Item No. 46173

CAS Registry No.: 68890-66-4
Formal Name: 1-hydroxy-4-methyl-6-(2,4,4-trimethylpentyl)-2(1H)-pyridinone with 2-aminoethanol
Synonym: Piroctone (ethanolamine salt)
MF: $C_{14}H_{23}NO_2 \bullet C_2H_7NO$
FW: 298.4
Purity: ≥95%
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

Piroctone olamine is supplied as a solid. A stock solution may be made by dissolving the piroctone olamine in the solvent of choice, which should be purged with an inert gas. Piroctone olamine is slightly soluble (0.1-1 mg/ml) in acetonitrile:water (1:1).

Description

Piroctone olamine is an antibacterial and antifungal agent.[1,2] It is active against *S. aureus*, *B. subtilis*, *E. coli*, *P. aeruginosa*, and *C. albicans* at 0.5%.[1] Piroctone olamine, when applied as a shampoo, decreases ear canal and neck colony-forming units (CFUs) in naturally *Malassezia*-infected beagle dogs.[2] It also decreases the levels of the T-box transcription factors TBX2 and TBX3 in 501-mel melanoma and Rh30 alveolar rhabdomyosarcoma cells at 10 µM and decreases the viability of the same cells (EC_{50}s = 12.18 and 31.29 µM, respectively).[3] Piroctone olamine also decreases histone deacetylase 6 (HDAC6) levels, increases beclin 1, a marker of autophagy, and acetylated lysine 9 on histone H3 (H3K9Ac) levels, and reduces tumor volume and weight in an MC-38 syngeneic mouse model of colon carcinoma.[4] Formulations containing piroctone olamine have been used in shampoos for the management of dandruff.

References

1. Zaika, S.V., Strilets, O.P., Baranova, I.I., *et al.* Research of antimicrobic activity of foaming products samples with octopirox. *Annals of Mechnikov Institute* N 1, 54-57 (2020).
2. Bordeau, P., Blumstein, P., Marchand, A.-M., *et al*. An in vivo procedure to evaluate antifungals agents on Malassezia pachydermatis in dogs: Example with a piroctone olamine containing shampoo. *J. Mycol. Med*. 16(1), 9-15 (2006).
3. Bleloch, J.S., Lu, S., Khan, S.F., *et al*. A high-throughput drug repurposing strategy to treat TBX2 and/or TBX3 dependent cancers. *Cancer Med.* 13(19), e70303 (2024).
4. Cui, C.Y., Li, Q.T., Xiang, X.Y., *et al*. Piroctone olamine promotes BECN1 transcription and activates autophagy by targeting HDAC6 in colorectal cancer. *Acta. Pharmacol. Sin*. 47(8), 2224-2239 (2026).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 08/04/2026

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