PRODUCT INFORMATION



Ricobendazole

Item No. 21880

CAS Registry No.: 54029-12-8

Formal Name: N-[6-(propylsulfinyl)-1H-benzimidazol-2-

yl]-carbamic acid, methyl ester

Synonym: Albendazole sulfoxide

MF: $C_{12}H_{15}N_3O_3S$

281.3 FW: **Purity:** ≥98%

UV/Vis.: λ_{max} : 224, 294 nm Supplied as: A crystalline 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

Ricobendazole is supplied as a crystalline solid. A stock solution may be made by dissolving the ricobendazole in the solvent of choice, which should be purged with an inert gas. Ricobendazole is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ricobendazole in these solvents is approximately 10 mg/ml.

Description

Ricobendazole, also known as albendazole sulfate, is a benzimidazole agent that inhibits tubulin polymerization and is commonly used as an anthelmintic and antiparasitic agent, with IC $_{90}$ values ranging from 3.8 x 10^{-2} to $<10^{-4}$ µg/ml against *Encephalitozoon* species.¹⁻⁴ *In vitro*, ricobendazole effectively kills Taenia cysts, with EC $_{50}$ and EC $_{99}$ values of 0.068 and 0.556 µg/ml, respectively in 11-day cultures, and inhibits adherence in *Giardia* species with a 24-hour IC $_{50}$ value of 3.15 µM. 5,6 This agent is metabolized from albendazole *via* cytochrome P450 (CYP450) and may modulate CYP450 activity. 1,2,7 In rat microsomes, ricobendazole reduces the activity of ethoxyresorufin O-deethylase (EROD) by more than 5-fold relative to albendazole, with an IC_{50} value of 5 μ M.²

References

- 1. Adas, G., Arikan, S., Kemik, O., et al. World J. Gastroenterol. 15(1), 112-116 (2009).
- 2. Baliharová, V., Velík, J., Fimanová, K., et al. Pharmacol. Rep. 57, 97-106 (2005).
- 3. Katiyar, S.K. and Edlind, T.D. Antimicrob. Agents and Chemother. 41(12), 2729-2732 (1997).
- 4. Ridoux, O. and Drancourt, M. Antimicrob. Agents and Chemother. 42(12), 3301-3303 (1998).
- 5. Morgan, U.M., Reynoldson, J.A., and Thompson, R.C.A. Antimicrob. Agents and Chemother. 37(2), 328-331 (1993).
- Palomares, F., Palencia, G., Pérez, R., et al. Antimicrob. Agents and Chemother. 48(6), 2302-2304 (2004).
- 7. Cai, Z.Y., Galettis, P., Lu, Y., et al. Anticancer Res. 27, 417-422 (2007).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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

subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information Buyer agrees to purchase the m can be found on our website.

Copyright Cayman Chemical Company, 11/28/2022

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