

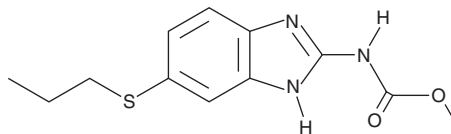
PRODUCT INFORMATION



Albendazole

Item No. 23705

CAS Registry No.: 54965-21-8
Formal Name: N-[6-(propylthio)-1H-benzimidazol-2-yl]-carbamic acid, methyl ester
Synonyms: ABZ, NSC 220008, SKF 62979
MF: C₁₂H₁₅N₃O₂S
FW: 265.3
Purity: ≥98%
UV/Vis.: λ_{max}: 217, 296 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

Albendazole is supplied as a crystalline solid. A stock solution may be made by dissolving the albendazole in the solvent of choice, which should be purged with an inert gas. Albendazole is soluble in the organic solvent DMSO at a concentration of approximately 10 mM.

Description

Albendazole is an orally bioavailable benzimidazole anthelmintic that is active against a variety of helminths, including liver flukes, tapeworms, and roundworms.¹ It eliminates *Trichostrongylus* in the fourth stomach of cattle and sheep when orally administered at doses ranging from 2.5 to 10 mg/kg as well as other species in the fourth stomach and the small and large intestine. Albendazole (0.05% in the diet) protects mice against lethal infection with *A. suum* larvae. It also inhibits growth of HT-29 human colorectal cancer cells (IC₅₀ = 0.12 μM), halts the cell cycle at the G₂/M phase, and induces apoptosis. In an HT-29 mouse xenograft model, it inhibits peritoneal tumor growth when administered intraperitoneally at a dose of 150 mg/kg but not when administered orally.² Albendazole inhibits mammalian tubulin polymerization and inhibits binding of [³H]mebendazole to *H. contortus* L3 larval tubulin (IC₅₀s = 6.9 and 0.21 μM, respectively).³ Formulations containing albendazole have been used in the treatment of tapeworm infections and in a variety of nematode infections in livestock and pets.

References

1. Theodorides, V.J., Gyurik, R.J., Kingsbury, W.D., *et al.* Anthelmintic activity of albendazole against liver flukes, tapeworms, lung and gastrointestinal roundworms. *Experientia* **32(6)**, 702-703 (1976).
2. Pourgholami, M.H., Akhter, J., Wang, L., *et al.* Antitumor activity of albendazole against the human colorectal cancer cell line HT-29: *In vitro* and in a xenograft model of peritoneal carcinomatosis. *Cancer Chemother. Pharmacol.* **55(5)**, 425-432 (2005).
3. Lacey, E. Mode of action of benzimidazoles. *Parasitol Today* **6(4)**, 112-115 (1990).

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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