

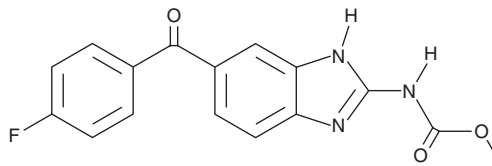
PRODUCT INFORMATION



Flubendazole

Item No. 26064

CAS Registry No.: 31430-15-6
Formal Name: N-[6-(4-fluorobenzoyl)-1H-benzimidazol-2-yl]-
carbamic acid, methyl ester
Synonyms: NSC 313680, R-17889, R-17899
MF: C₁₆H₁₂FN₃O₃
FW: 313.3
Purity: ≥95%
UV/Vis.: λ_{max}: 212, 249, 312 nm
Supplied as: A crystalline solid
Storage: 4°C
Stability: ≥4 years



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

Laboratory Procedures

Flubendazole is supplied as a crystalline solid. A stock solution may be made by dissolving the flubendazole in the solvent of choice, which should be purged with an inert gas. Flubendazole is soluble in organic solvents such as ethanol and DMSO. It is also soluble in water. The solubility of flubendazole in ethanol, DMSO, and water is approximately 1 mg/ml at 25°C. Flubendazole is also soluble in 2% acetic acid. We do not recommend storing the aqueous solution for more than one day.

Description

Flubendazole is a benzimidazole carbamate anthelmintic.¹ It completely eliminates larvae in a mouse model of *A. cantonensis* infection and exhibits a mean larval reduction of 100% in a *T. spiralis* infection model when administered at doses of 5 and 50 mg/kg per day, respectively.² Flubendazole inhibits mammalian tubulin polymerization (IC₅₀ = 2.5 μM) and inhibits binding of [³H]mebendazole to *H. contortus* L3 larval tubulin (IC₅₀ = 0.17 μM).³ Flubendazole also inhibits the proliferation of BT-549, SK-BR-3, MDA-MB-231, and MCF-7 breast cancer cells (IC₅₀s = 0.72, 1.51, 1.75, and 5.51 μM, respectively) and reduces tumor growth in an MDA-MB-231 mouse xenograft model when administered at a dose of 25 mg/kg.⁴

References

1. Čáňová, K., Rozkydalová, L., and Rudolf, E. Anthelmintic flubendazole and its potential use in anticancer therapy. *Acta Medica (Hradec Kralove)* **60(1)**, 5-11 (2017).
2. Maki, J. and Yanagisawa, T. A comparison of the effects of flubendazole and thiabendazole on the larvae of *Angiostrongylus cantonensis*, *Trichinella spiralis*, *Diphyllobothrium erinacei* and *Hymenolepis nana* in mice. *Parasitology* **87(Pt 3)**, 525-531 (1983).
3. Lacey, E. Mode of action of benzimidazoles. *Parasitol Today* **6(4)**, 112-115 (1990).
4. Hou, Z.-J., Lou, X., Zhang, W., et al. Flubendazole, FDA-approved anthelmintic, targets breast cancer stem-like cells. *Oncotarget* **6(8)**, 6326-6340 (2015).

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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