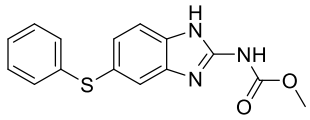
Product data sheet

MedKoo Cat#: 531022 Name: Fenbendazole CAS#: 43210-67-9 Chemical Formula: $C_{15}H_{13}N_3O_2S$ Exact Mass: 299.0728 Molecular Weight: 299.348	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Fenbendazole, also known as Panacur, is a benzimidazole-class anthelmintic. Intensive treatments with Fenbendazole were toxic to EMT6 cells in vitro; toxicity increased with incubation time and under conditions of severe hypoxia. Fenbendazole did not alter the dose-response curves for radiation or docetaxel; instead, the agents produced additive cytotoxicities. Febendazole in maximally-intensive regimens did not alter the growth of EMT6 tumors, or increase the antineoplastic effects of radiation.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	16.67	55.69
DMF	10.0	33.41

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	3.34 mL	16.70 mL	33.41 mL
5 mM	0.67 mL	3.34 mL	6.68 mL
10 mM	0.33 mL	1.67 mL	3.34 mL
50 mM	0.07 mL	0.33 mL	0.67 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. de Oliveira HC, Joffe LS, Simon KS, Castelli RF, Reis FCG, Bryan AM, Borges BS, Medeiros LCS, Bocca AL, Del Poeta M, Rodrigues ML. Fenbendazole Controls In Vitro Growth, Virulence Potential, and Animal Infection in the Cryptococcus Model. Antimicrob Agents Chemother. 2020 May 21;64(6):e00286-20. doi: 10.1128/AAC.00286-20. PMID: 32253211; PMCID: PMC7269510.
2. Duan Q, Liu Y, Rockwell S. Fenbendazole as a potential anticancer drug. Anticancer Res. 2013 Feb;33(2):355-62. PMID: 23393324; PMCID: PMC3580766.

In vivo study

1. de Oliveira HC, Joffe LS, Simon KS, Castelli RF, Reis FCG, Bryan AM, Borges BS, Medeiros LCS, Bocca AL, Del Poeta M, Rodrigues ML. Fenbendazole Controls In Vitro Growth, Virulence Potential, and Animal Infection in the Cryptococcus Model. Antimicrob Agents Chemother. 2020 May 21;64(6):e00286-20. doi: 10.1128/AAC.00286-20. PMID: 32253211; PMCID: PMC7269510.

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2. Cai Y, Zhou J, Webb DC. Treatment of mice with fenbendazole attenuates allergic airways inflammation and Th2 cytokine production in a model of asthma. Immunol Cell Biol. 2009 Nov-Dec;87(8):623-9. doi: 10.1038/icb.2009.47. Epub 2009 Jul 21. PMID: 19621025.

7. Bioactivity

Biological target:

Fenbendazole is a broad spectrum benzimidazole anthelmintic used against gastrointestinal parasites.

In vitro activity

The 2-h incubation with fenbendazole was not toxic to aerobic EMT6 cells and produced no changes in the numbers of cells in the monolayer cultures, even at doses approaching the limit of solubility of the drug. The 24-h treatment with fenbendazole resulted in significant decreases in both the numbers of cells in the cultures at the end of treatment and the clonogenicity of those cells.

Reference: Anticancer Res. 2013 Feb; 33(2): 355–362. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3580766/

In vivo activity

In this investigation, mice fed FBZ (fenbendazole)-supplemented food during the in utero and post-weaning period developed attenuated lung eosinophilia, antigen-specific IgG1 and Th2 cytokine responses in a model of asthma. Treatment of the mediastinal lymph node cells from allergic mice with FBZ in vitro attenuated cell proliferation, IL-5 and IL-13 production and expression of the early lymphocyte activation marker, CD69 on CD4(+) T cells and CD19(+) B cells. In addition, eosinophilia and Th2 responses remained attenuated after a 4-week withholding period in allergic mice treated preweaning with FBZ.

Reference: Immunol Cell Biol. 2009 Nov-Dec;87(8):623-9. https://pubmed.ncbi.nlm.nih.gov/19621025/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.