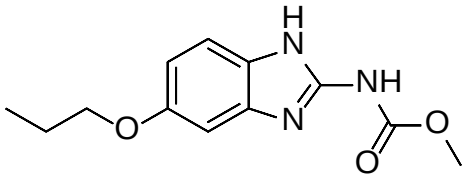
Product data sheet

MedKoo Cat#: 326952 Name: Oxibendazole CAS: 20559-55-1 Chemical Formula: $C_{12}H_{15}N_3O_3$ Exact Mass: 249.1113 Molecular Weight: 249.27	
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:
Oxibendazole, also known as SK&F-30310, SKF-30310, is a DNA polymerase inhibitor potentially for the treatment of helminth intestinal infections. Oxibendazole is laso used to protect against roundworms, strongyles, threadworms, pinworms and lungworm infestations in horses and some domestic pets. It is usually white to yellowish in appearance.

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
DMF	5.0	20.06
DMSO	2.17	8.69
Water	1.0	4.01

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	4.01 mL	20.06 mL	40.12 mL
5 mM	0.80 mL	4.01 mL	8.02 mL
10 mM	0.40 mL	2.01 mL	4.01 mL
50 mM	0.08 mL	0.40 mL	0.80 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. Park H, Lim W, You S, Song G. Oxibendazole induces apoptotic cell death in proliferating porcine trophectoderm and uterine luminal epithelial cells via mitochondria-mediated calcium disruption and breakdown of mitochondrial membrane potential. Comp Biochem Physiol C Toxicol Pharmacol. 2019 Jun;220:9-19. doi: 10.1016/j.cbpc.2019.02.014. Epub 2019 Feb 27. PMID: 30822534.

2. Chen Q, Li Y, Zhou X, Li R. Oxibendazole inhibits prostate cancer cell growth. Oncol Lett. 2018 Feb;15(2):2218-2226. doi: 10.3892/ol.2017.7579. Epub 2017 Dec 11. PMID: 29434928; PMCID: PMC5776919.

In vivo study

TBD

7. Bioactivity
Biological target:

Oxibendazole is an effective benzimidazole anthelmintic and is against nema-tode infections.

Product data sheet

In vitro activity

Cell proliferation decreased in both pTr and pLE cells in response to oxibendazole, and this study determined that this was modulated through intracellular cell signal transduction. Phosphorylation of ERK1/2, P90RSK, and S6 were downregulated by exposure to a 200 nM dose of oxibendazole in both types of cells, while the expression of phosphorylated JNK, AKT, and P70S6K was upregulated. Pre-treatment with a PI3K/AKT inhibitor (Wortmannin), ERK1/2 inhibitor (U0126), and JNK inhibitor (SP600125) induced the signaling interactions of these molecules, and oxibendazole co-treatment with each inhibitor resulted in even greater decreases in cell proliferation.

Reference: Comp Biochem Physiol C Toxicol Pharmacol. 2019 Jun;220:9-19. https://pubmed.ncbi.nlm.nih.gov/30822534/

In vivo activity

TBD

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.