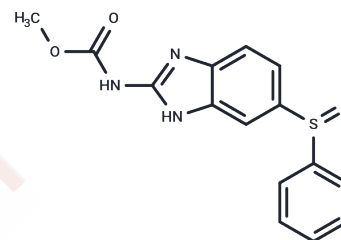


## Oxfendazole

## Chemical Properties

CAS No. :	53716-50-0
Formula:	C <sub>15</sub> H <sub>13</sub> N <sub>3</sub> O <sub>3</sub> S
Molecular Weight:	315.35
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Oxfendazole (RS-8858), a broad spectrum benzimidazole anthelmintic, protects livestock against roundworm, strongyles and pinworms.
Targets(IC50)	Glucokinase, Microtubule Associated, Parasite
In vivo	Oxfendazole (OX) induces not only mRNA expression of phase I enzymes Cyp1a1, Cyp1a2, but also Nrf2-regulated phase II enzymes such as Gpx2, Nqo1, Yc2, Akr7a3 and Gstm1 in rats, presumably due to an adaptive response against OX-induced oxidative stress. Oxfendazole enhances oxidative DNA damage (as assessed by 8-hydroxydeoxyguanosine; 8-OHdG) and lipid peroxidation (as assessed by thiobarbituric acid-reactive substances; TBARS) in rats. [1] Oxfendazole administered at the therapeutic dose (4.5 mg/kg) and at the highest dose (22.5 mg/kg) increase 1.54- and 2.36-fold the total liver microsomal cytochrome P450 and more particularly the isoenzyme P450IA2 (95% and 184% increases) in rabbit liver. [2] Oxfendazole MRL induces a mutagenic effect in all tested cell types. Oxfendazole exhibits embryotoxicity including teratogenicity. Oxfendazole induces a disturbance in the different biochemical contents of all tested tissues in mice. [3] Oxfendazole increases the incidence and multiplicity of altered foci (4.0- and 3.6-fold, respectively) and hepatocellular adenomas (HCAs) (3.0- and 5.5-fold, respectively). Oxfendazole treatment induces 5.2- and 5.6-fold increases in the number of proliferating cell nuclear antigen (PCNA)-positive cells and single-stranded DNA (ssDNA)-positive cells in HCAs compared with the surrounding tissue, respectively. [4] Oxfendazole and its sulphone metabolite attain a significantly higher plasma concentration and remain much longer in plasma compared with fenbendazole (FBZ) and albendazole (ABZ) and their respective metabolites in dogs. [5]

## Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 28.7 mg/mL (91.01 mM), Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.34 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.</i>

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In vivo Formulation	<i>Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1711 mL	15.8554 mL	31.7108 mL
5 mM	0.6342 mL	3.1711 mL	6.3422 mL
10 mM	0.3171 mL	1.5855 mL	3.1711 mL
50 mM	0.0634 mL	0.3171 mL	0.6342 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Dewa Y, et al. Arch Toxicol,2009, 83(5), 503-511.
- Gleizes C, et al. Biochem Pharmacol,1991, 41(12), 1813-1820.
- El-Makawy A, et al. Reprod Nutr Dev,2006, 46(2), 139-156.
- Dewa Y, et al. Arch Toxicol,2011, 85(2), 155-162.
- Gokbulut C, et al. Vet Parasitol,2007, 148(3-4), 279-287.

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