# **PRODUCT** INFORMATION



Triclabendazole-<sup>13</sup>C-d<sub>3</sub>

Item No. 34011

CAS Registry No.:	2938916-53-9	
Formal Name:	6-chloro-5-(2,3-dichlorophenoxy)-2-	
	((methyl- <sup>13</sup> C-d <sub>3</sub> )thio)-1H-benzimidazole	CI
Synonym:	TCBZ- <sup>13</sup> C-d <sub>3</sub>	
MF:	C <sub>13</sub> [ <sup>13</sup> C]H <sub>6</sub> Ď <sub>3</sub> Cl <sub>3</sub> N <sub>2</sub> OS	
FW:	363.7	
Chemical Purity:	≥95% (Triclabendazole)	
Deuterium		
Incorporation:	≥99% deuterated forms (d <sub>1</sub> -d <sub>3</sub> ); ≤1% d <sub>0</sub>	
Supplied as:	A 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

Triclabendazole- $^{13}$ C-d<sub>3</sub> is intended for use as an internal standard for the quantification of triclabendazole (Item No. 18883) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Triclabendazole-13C-d3 is supplied as a solid. A stock solution may be made by dissolving the triclabendazole $^{13}$ C-d<sub>2</sub> in the solvent of choice, which should be purged with an inert gas. Triclabendazole $^{13}$ C-d<sub>2</sub> is soluble in acetonitrile, DMSO, and methanol.

# Description

Triclabendazole is a benzimidazole anthelmintic.<sup>1</sup> It eliminates both immature and adult flukes in a sheep model of F. hepatica infection when administered at a dose of 10 mg/kg.<sup>2</sup> Triclabendazole (5  $\mu$ M) also protects against glucose- or  $\alpha$ -synuclein-induced apoptosis in S. cerevisiae via inhibition of adenylyl cyclase in the Ras-adenylyl cyclase-protein kinase A (PKA) nutrient sensing pathway.<sup>3</sup>

# References

- 1. Shrifi, Y., Farahnak, A., Golestani, A., et al. Triclabendazole effect on protease enzyme activity in the excretory- secretory products of Fasciola hepatica in vitro. Iran. J. Parasitol. 9(1), 107-113 (2014).
- 2. Smeal, M.G. and Hall, C.A. The activity of triclabendazole against immature and adult Fasciola hepatica infections in sheep. Aust. Vet. J. 60(11), 329-331 (1983).
- 3. Lee, Y. J., Burlet, E., Wang, S., et al. Triclabendazole protects yeast and mammalian cells from oxidative stress: Identification of a potential neuroprotective compound. Biochem. Biophys. Res. Commun. 414(1), 205-208 (2011).

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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