

# Produktinformation



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Diagnostik & molekulare Diagnostik



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## SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



# PRODUCT INFORMATION



# Fenbendazole-d<sub>3</sub>

Item No. 27842

CAS Registry No.: 1228182-47-5

methyl-d<sub>3</sub> (5-(phenylthio)-1H-benzo[d] Formal Name:

imidazol-2-yl)carbamate

Methyl 5-(phenylthio)-2-Synonym:

benzimidazolecarbamate-d<sub>2</sub>

MF:  $C_{15}H_{10}D_3N_3O_2S$ 

FW: 302.4

**Chemical Purity:** ≥98% (Fenbendazole)

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>);  $\leq$ 1% d<sub>0</sub>

Supplied as: A solid -20°C Storage: Stability: ≥2 years

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

#### **Laboratory Procedures**

Fenbendazole-d<sub>3</sub> is intended for use as an internal standard for the quantification of fenbendazole (Item No. 19687) 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).

Fenbendazole-d $_3$  is supplied as a solid. A stock solution may be made by dissolving the fenbendazole-d $_3$ in the solvent of choice, which should be purged with an inert gas. Fenbendazole-da is slightly soluble in methanol and DMSO.

### Description

Fenbendazole is a benzimidazole anthelmintic.<sup>1</sup> It is active against Giardia in vitro (IC<sub>50</sub> = 0.3  $\mu$ M). Fenbendazole (20 mg/kg) prevents infiltration of parasites into the brain in a rabbit model of E. cuniculi infection.<sup>2</sup> It also activates HIF- $1\alpha$  and prevents oxidative stress-induced death in primary neurons in vitro.<sup>3</sup>

#### References

- 1. Morgan, U.M., Reynoldson, J.A., and Thompson, R.C.A. Activities of several benzimidazoles and tubulin inhibitors against Giardia spp. in vitro. Antimicrob. Agents Chemother. 37(2), 328-331 (1993).
- Suter, C., Müller-Doblies, U.U., Hatt, J.-M., et al. Prevention and treatment of Encephalitozoon cuniculi infection in rabbits with fenbendazole. Vet. Rec. 148(15), 478-480 (2001).
- 3. Aleyasin, H., Karuppagounder, S.S., Kumar, A., et al. Antihelminthic benzimidazoles are novel HIF activators that prevent oxidative neuronal death via binding to tubulin. Antioxid. Redox Signal. 22(2), 121-134 (2015).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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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#### **CAYMAN CHEMICAL**

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.**CAYMANCHEM**.COM