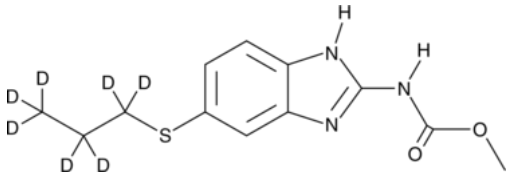
Product Data Sheet

Product Name: Albendazole-d7
Cat. No.: GC48848

Chemical Properties

Cas. No.	1287076-43-0		
SMILES	COC(NC1=NC2=CC(SC([2H])([2H])C([2H])([2H])C([2H])([2H])[2H])=CC=C2N1)=O		
Formula	C12H8D7N3O2S	M.Wt	272.4
Solubility	DMSO: slightly soluble,Methanol: slightly soluble	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Albendazole-d_7 is intended for use as an internal standard for the quantification of albendazole by GC- or LC-MS. Albendazole is an orally bioavailable benzimidazole anthelmintic that is active against a variety of helminths, including liver flukes, tapeworms, and roundworms.[1] It eliminates *Trichostrongylus* in the fourth stomach of cattle and sheep when orally administered at doses ranging from 2.5 to 10 mg/kg as well as other species in the fourth stomach and the small and large intestine. Albendazole (0.05% in the diet) protects mice against lethal infection with *A. suum* larvae. It also inhibits growth of HT-29 human colorectal cancer cells (IC_{50} = 0.12 µM), halts the cell cycle at the G_2/M phase, and induces apoptosis. In an HT-29 mouse xenograft model, it inhibits peritoneal tumor growth when administered intraperitoneally at a dose of 150 mg/kg but not when administered orally.[2] Albendazole inhibits mammalian tubulin polymerization and inhibits binding of [^{3}H]mebendazole to *H. contortus* L3 larval tubulin (IC_{50}s = 6.9 and 0.21 µM, respectively).[3]

Product Data Sheet

Formulations containing albendazole have been used in the treatment of tapeworm infections and in a variety of nematode infections in livestock and pets.

1.Theodorides, V.J., Gyurik, R.J., Kingsbury, W.D., et al.Anthelmintic activity of albendazole against liver flukes, tapeworms, lung and gastrointestinal roundwormsExperientia32(6)702-703(1976) 2.Pourgholami, M.H., Akhter, J., Wang, L., et al.Antitumor activity of albendazole against the human colorectal cancer cell line HT-29: In vitro and in a xenograft model of peritoneal carcinomatosisCancer Chemother. Pharmacol.55(5)425-432(2005) 3.Lacey, E.Mode of action of benzimidazolesParasitol. Today6(4)112-115(1990)

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA