Carbendazim

Cat. No.: HY-13582

CAS No.: 10605-21-7

Molecular Formula: $C_9H_9N_3O_2$

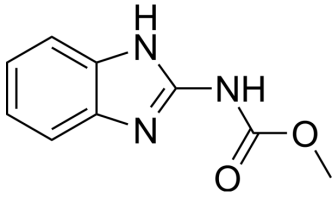
Molecular Weight: 191.19

Target: Fungal; Parasite

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 6.8 mg/mL (35.57 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.2304 mL	26.1520 mL	52.3040 mL
5 mM	1.0461 mL	5.2304 mL	10.4608 mL
10 mM	0.5230 mL	2.6152 mL	5.2304 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 0.5 mg/mL (2.62 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.5 mg/mL (2.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Carbendazim is a potent and orally active broad-spectrum benzimidazole fungicide and can be acts as a pesticide for fungal diseases research, such as Seproria, Fusarium and Sclerotina[1][3]. Carbendazim is a benzimidazole (HY-Y1825) derivative with antitumor activity and used for cancer research, especially advanced solid tumors and lymphoma[3].

In Vitro

Carbendazim (4-60 μM; 24 hours) has no effects on viability of HeLa cells in a CCK-8 assay[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Carbendazim (oral gavage; 100 and 500 mg/kg; once daily in diet; 28 days) induces hepatic lipid metabolism disorder, it results in a significant increase of hepatic lipid accumulation and triglyceride (TG) levels in mice[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6-week-old male ICR mice[2]
Dosage:	100 and 500 mg/kg
Administration:	Oral gavage; 100 and 500 mg/kg; once daily in diet; 28 days
Result:	Increased the relative mRNA levels of some key genes related to lipogenesis and TG synthesis. Up-regulated mRNA levels of IL-1b and IL-6 in the liver in mice. Increased the serum concentrations of 2 proinflammatory cytokines IL-1b and IL-6 at 500 mg/kg. However, in the fat tissues, onlyIL-1b in the CBZ-500-treated group increased significantly as compared with the control group.

CUSTOMER VALIDATION

- Chemosphere. 2022 Jan 4;133522.
- Chemosphere. 2021, 130769.
- Toxics. 2021, 9(12), 349.
- Research Square Preprint. 2021 Aug.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Carbendazim

[2]. Yuanxiang Jin, et al. Oral Exposure of Mice to Carbendazim Induces Hepatic Lipid Metabolism Disorder and Gut Microbiota Dysbiosis. Toxicol Sci. 2015 Sep;147(1):116-26

[3]. Bilge G. Tuna, et al. Enhanced antitumor activity of carbendazim on HeLa cervical cancer cells by aptamer mediated controlled release. RSC Advances

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA