Flubendazole-d_3

Cat. No.: HY-B0294S

CAS No.: 1173021-08-3

Molecular Formula: $C_{16}H_9D_3FN_3O_3$

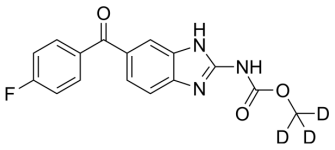
Molecular Weight: 316.3

Target: Microtubule/Tubulin; Apoptosis; Parasite

Pathway: Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis; Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 4.17 mg/mL (13.18 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1616 mL	15.8078 mL	31.6156 mL
	5 mM	0.6323 mL	3.1616 mL	6.3231 mL
	10 mM	0.3162 mL	1.5808 mL	3.1616 mL

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

BIOLOGICAL ACTIVITY

Description

Flubendazole-d_3 is the deuterium labeled Flubendazole. Flubendazole is a safe and efficacious anthelmintic agent, which is widely used for anthelmintic to human, rodents and ruminants. Flubendazole exerts anticancer activities by mechanisms including inhibition of microtubule function. Flubendazole induces p53-mediated apoptosis and arrests G2/M cell cycle[1][2].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

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

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Michaelis M, et al. Identification of flubendazole as potential anti-neuroblastoma compound in a large cell line screen. Sci Rep. 2015 Feb 3;5:8202.

[3]. Zhou X, et al. Flubendazole inhibits glioma proliferation by G2/M cell cycle arrest and pro-apoptosis. Cell Death Discov. 2018 Feb 14;4:18.

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