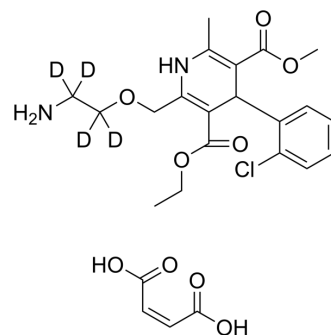


## Amlodipine-1,1,2,2-d<sub>4</sub> maleate

<b>Cat. No.:</b>	HY-B0317S		
<b>CAS No.:</b>	1185246-15-4		
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>25</sub> D <sub>4</sub> ClN <sub>2</sub> O <sub>9</sub>		
<b>Molecular Weight:</b>	528.97		
<b>Target:</b>	Calcium Channel; Isotope-Labeled Compounds		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling; Others		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (189.05 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.8905 mL	9.4523 mL	18.9047 mL
	5 mM	0.3781 mL	1.8905 mL	3.7809 mL
	10 mM	0.1890 mL	0.9452 mL	1.8905 mL

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

### BIOLOGICAL ACTIVITY

#### Description

Amlodipine-1,1,2,2-d<sub>4</sub> (maleate) is the deuterium labeled Amlodipine. Amlodipine, an antianginal agent and an orally active dihydropyridine calcium channel blocker, works by blocking the voltage-dependent L-type calcium channels, thereby inhibiting the initial influx of calcium. Amlodipine can be used for the research of high blood pressure and cancer[1][2][3].

#### 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<sup>[1]</sup>.

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

### REFERENCES

[1]. Kishen G. Bulsara, et al. Amlodipine.

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[3]. Yoshida J, et, al. Antitumor effects of amlodipine, a Ca<sup>2+</sup> channel blocker, on human epidermoid carcinoma A431 cells in vitro and in vivo. Eur J Pharmacol. 2004 May 25;492(2-3):103-12.

[4]. Okuyama Y, et, al. The effects of anti-hypertensive drugs and the mechanism of hypertension in vascular smooth muscle cell-specific ATP2B1 knockout mice. Hypertens Res. 2018 Feb;41(2):80-87.

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

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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