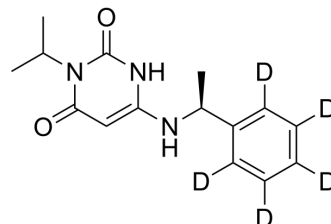


## Mavacamten-d<sub>5</sub>

Cat. No.:	HY-109037S3		
CAS No.:	2453251-00-6		
Molecular Formula:	C <sub>15</sub> H <sub>14</sub> D <sub>5</sub> N <sub>3</sub> O <sub>2</sub>		
Molecular Weight:	278.36		
Target:	Isotope-Labeled Compounds; Myosin		
Pathway:	Others; Cytoskeleton		
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 : 100 mg/mL (359.25 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.5925 mL	17.9624 mL	35.9247 mL
		5 mM	0.7185 mL	3.5925 mL	7.1849 mL
10 mM		0.3592 mL	1.7962 mL	3.5925 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: 2.5 mg/mL (8.98 mM); Clear solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (8.98 mM); Clear solution; Need ultrasonic				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (8.98 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

Description	Mavacamten-d <sub>5</sub> (MYK461-d <sub>5</sub> ; SAR439152-d <sub>5</sub> ) is deuterium labeled Mavacamten (HY-109037). Mavacamten (MYK461) is an orally active modulator of cardiac myosin, with IC <sub>50</sub> s of 490, 711 nM for bovine cardiac and human cardiac, respectively.
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.

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## REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Kawas RF, et al. A small-molecule modulator of cardiac myosin acts on multiple stages of the myosin chemomechanical cycle. *J Biol Chem*. 2017 Oct 6;292(40):16571-16577.
- [3]. Stern JA, et al. A Small Molecule Inhibitor of Sarcomere Contractility Acutely Relieves Left Ventricular Outflow Tract Obstruction in Feline Hypertrophic Cardiomyopathy. *PLoS One*. 2016 Dec 14;11(12):e0168407.
- [4]. Green EM, et al. A small-molecule inhibitor of sarcomere contractility suppresses hypertrophic cardiomyopathy in mice. *Science*. 2016 Feb 5;351(6273):617-21.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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