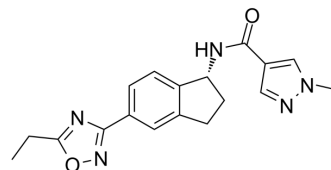


Aficamten

Cat. No.:	HY-139465		
CAS No.:	2364554-48-1		
Molecular Formula:	C ₁₈ H ₁₉ N ₅ O ₂		
Molecular Weight:	337.38		
Target:	Myosin		
Pathway:	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 : 125 mg/mL (370.50 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.9640 mL	14.8201 mL	29.6402 mL
		5 mM	0.5928 mL	2.9640 mL	5.9280 mL
10 mM		0.2964 mL	1.4820 mL	2.9640 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (6.17 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Aficamten (CK-274) is a potent cardiac myosin inhibitor with an IC ₅₀ of 1.4 μM. Aficamten can be used for the research of hypertrophic cardiomyopathy (HCM) ^[1] .
In Vivo	Aficamten is a next-generation cardiac myosin inhibitor that provides a projected human half-life appropriate for once a day dosing, reaching steady state within two weeks, and demonstrates a wide therapeutic window in vivo with a clear PK/PD relationship ^[1] . Aficamten exhibits moderate oral bioavailability (mouse 98%, rat 55%, rat 58%, rat 79%, dog 45%, monkey 41%) following

oral administration (mouse 1 mg/kg, rat 2 mg/kg, rat 3 mg/kg, rat 8 mg/kg, dog 1 mg/kg and monkey 1 mg/kg)^[1]. Aficamten exhibits terminal elimination half-lives (mouse 4.5 h, rat 3.0 h, dog 33.8 h and, monkey 8.1 h) following intravenous administration (mouse 0.5 mg/kg, rat 1 mg/kg, dog 1 mg/kg and monkey 1.0 mg/kg)^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Chihyuan Chuang, et al. Discovery of Aficamten (CK-274), a Next-Generation Cardiac Myosin Inhibitor for the Treatment of Hypertrophic Cardiomyopathy. J Med Chem. 2021 Oct 14;64(19):14142-14152.

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

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