

ML324

Cat. No.:	HY-12725		
CAS No.:	1222800-79-4		
Molecular Formula:	C ₂₁ H ₂₃ N ₃ O ₂		
Molecular Weight:	349.43		
Target:	Histone Demethylase; HSV; CMV		
Pathway:	Epigenetics; 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 : 31.25 mg/mL (89.43 mM); ultrasonic and warming and heat to 60°C)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
	Preparing Stock Solutions	1 mM	2.8618 mL	14.3090 mL
	5 mM	0.5724 mL	2.8618 mL	
	10 mM	0.2862 mL	1.4309 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 (7.15 mM); Clear solution			
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (5.95 mM); Clear solution			

BIOLOGICAL ACTIVITY

Description	ML324 is a potent JMJD2 demethylase inhibitor with antiviral activity. ML324 also exhibits inhibition for the histone demethylase KDM4B, with an IC ₅₀ of 4.9 μM. ML324 has potent anti-viral activity against both herpes simplex virus (HSV) and human cytomegalovirus (hCMV) infection via inhibition viral IE gene expression ^{[1][2]} .
IC ₅₀ & Target	IC ₅₀ : JMJD2 ^[1] , 4.9 μM (KDM4B) ^[2]
In Vitro	ML324 produces a significant reduction in Aa-LPS-induced osteoclastogenesis in osteoclast progenitors ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- PLoS Pathog. 2020 Mar 24;16(3):e1008429.
- Acta Pharmacol Sin. 2021 Apr 13.
- Int J Mol Sci. 2022, 23(14), 7586.
- Patent. US20180263995A1.

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REFERENCES

[1]. Rai G, et al. Discovery of ML324, a JMJD2 demethylase inhibitor with demonstrated antiviral activity.

[2]. Joy E. Kirkpatrick, et al. Inhibition of the histone demethylase KDM4B leads to activation of KDM1A, attenuates bacterial-induced pro-inflammatory cytokine release, and reduces osteoclastogenesis. Epigenetics. 2018; 13(5): 557–572.

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

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