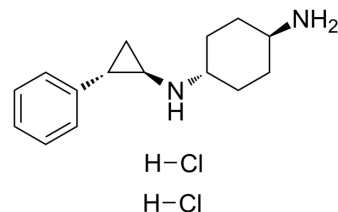


Iadademstat dihydrochloride

Cat. No.:	HY-12782T
CAS No.:	1431303-72-8
Molecular Formula:	C ₁₅ H ₂₄ Cl ₂ N ₂
Molecular Weight:	303.27
Target:	Histone Demethylase
Pathway:	Epigenetics
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 2 years; -20°C, 1 year (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 57.75 mg/mL (190.42 mM; Need ultrasonic and warming)					
	DMSO : 0.69 mg/mL (2.28 mM; Need ultrasonic and warming)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		3.2974 mL	16.4870 mL	32.9739 mL
5 mM			0.6595 mL	3.2974 mL	6.5948 mL	
	10 mM		0.3297 mL	1.6487 mL	3.2974 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (329.74 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	Iadademstat (ORY-1001) dihydrochloride is a selective irreversible lysine (K)-specific demethylase 1A (KDM1A/LSD1) inhibitor.
IC ₅₀ & Target	KDM1A/LSD1 ^[1]
In Vitro	Iadademstat dihydrochloride is a KDM1A inhibitor that inactivate KDM1A by irreversible binding to the flavin adenine nucleotide (FAD) cofactor. Iadademstat has very high selectivity for KDM1A over the MAO enzymes, high selectivity over KDM1B and unrivaled subnanomolar cellular activity in differentiation and colony formation assays on mixed lineage leukemia (MLL)-translocated acute myeloid leukemia (AML) cell lines. Iadademstat provokes a time and dose-dependent induction of the Cd11b differentiation marker in MLL-AF9 cells, which interestingly precedes changes in H3K4me2 levels. While MLL-translocated cells are especially sensitive, other acute leukemia (AL) cell lines also respond to Iadademstat ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Iadademstat reduces AML tumor growth in mice and rat xenografts and increases survival time in a disseminated model of T-ALL^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Oncogene. 2021 Apr;40(15):2711-2724.
- Cell Biosci. 2022 Aug 30;12(1):140
- J Appl Toxicol. 2023 Jul 5.

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REFERENCES

[1]. Maes T, et al. KDM1 histone lysine demethylases as targets for treatments of oncological and neurodegenerative disease. Epigenomics. 2015;7(4):609-26. doi: 10.2217/epi.15.9.

[2]. Tamara Maes, et al. ORY-1001, a Potent and Selective Covalent KDM1A Inhibitor, for the Treatment of Acute Leukemia. Cancer Cell. 2018 Mar 12;33(3):495-511.e12.

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

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