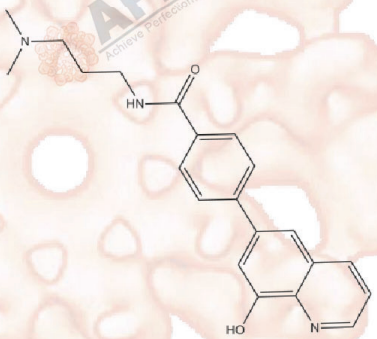
Product Data Sheet

ML324



Cat. No.:	B4891
CAS No.:	1222800-79-4
Formula:	C21H23N3O2
M.Wt:	349.43
Synonyms:	
Target:	Chromatin/Epigenetics
Pathway:	Histone Demethylases
Storage:	Store at -20°C

Solvent & Solubility

insoluble in H2O; ⩾17.45 mg/mL in DMSO; ⩾2.4 mg/mL in EtOH with ultrasonic

In Vitro — Preparing Stock Solutions

Concentration \ Mass (Solvent)	1mg	5mg	10mg
1 mM	2.8618 mL	14.3090 mL	28.6180 mL
5 mM	0.5724 mL	2.8618 mL	5.7236 mL
10 mM	0.2862 mL	1.4309 mL	2.8618 mL

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

Biological Activity

Shortsummary	JMJD2 demethylase inhibitor, potent and cell-permeable
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	HFF cells
Preparation method:	The solubility of this compound in DMSO is > 17.5 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.
Reacting conditions:	5 ~ 50 μM

	Applications:	Compared with DMOG (IC50 = 0.75 mM), ML324 potently reduced IE gene expression, with an IC50 value of 10 μM. Besides, ML324 did not affect the expression of the cellular controls Sp1, S15 and TBP. In HFF cells infected with HSV-1, ML324 lowered viral yields in a dose-dependent manner (~ 4 ~ 5 logs at 25 μM) while 1.5 mM of DMOG was required to cause the same reduction.
In Vivo	**Animal experiment**	
	Animal models:	A mouse ganglia explant model of latently infected mice
	Dosage form:	50 μM; 48 hrs
	Applications:	In a mouse ganglia explant model of latently infected mice, ML324 significantly inhibited viral activity. At the concentration of 50 μM, ML324 reduced the viral yield by 4.5 logs for each ganglia. Immunofluorescent staining of explanted ganglia sections showed that ML324 inhibited viral reactivation events. However, the withdrawal of ML324 resulted in marked viral replication.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Li N, Yang L, et al. "BET bromodomain inhibitor JQ1 preferentially suppresses EBV-positive nasopharyngeal carcinoma cells partially through repressing c-Myc." Cell Death Dis. 2018 Jul 9;9(7):761.PMID:29988031

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References

[1]. Rai G, Kawamura A, Tumber A, Liang Y, Vogel JL, Arbuckle JH, Rose NR, Dexheimer TS, Foley TL, King ON, Quinn A, Mott BT, Schofield CJ, Oppermann U,Jadhav A, Simeonov A, Kristie TM, Maloney DJ. Discovery of ML324, a JMJD2 demethylase inhibitor with demonstrated antiviral activity. 2012 Dec 17 [updated 2013 Sep 16]. Probe Reports from the NIH Molecular Libraries Program [Internet]. Bethesda (MD): National Center for Biotechnology Information (US); 2010-.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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