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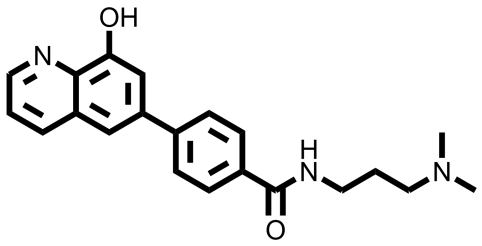
JMJD2 Histone Demethylase Inhibitor – ML324

Chemical Name: N-(3-(dimethylamino)propyl)-4-(8-hydroxyquinolin-6-yl)benzamide



Molecular Weight:	349.43
Formula:	$C_{21}H_{23}N_3O_2$
Purity:	≥98%
CAS#:	1222800-79-4
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

ML324 is a potent, selective and cell permeable inhibitor of Jumonji domain-containing protein 2 (JMJD2) histone demethylase with IC_{50} ~0.92 μM toward JMJD2E. It has excellent in vitro ADME properties, and it could effectively block both herpes simplex virus (HSV) and human cytomegalovirus (hCMV) infection via inhibition viral IE gene expression. ML324 suppresses the formation of HSV plaques, even at high MOI, and blocks HSV-1 reactivation in a mouse ganglia explant model of latently infected mice.

How to Use:

In vitro: ML324 was used at 10-50 μM in vitro and cellular assays.

In vivo: n/a

Reference:

1. Rai G, et al. Discovery of ML324, a JMJD2 demethylase inhibitor with demonstrated antiviral activity. (2012) Probe Reports from the NIH Molecular Libraries Program.
2. Liang Y, et al. Targeting the JMJD2 histone demethylases to epigenetically control herpesvirus infection and reactivation from latency. (2013) Sci Transl Med. 5(167):167ra5.