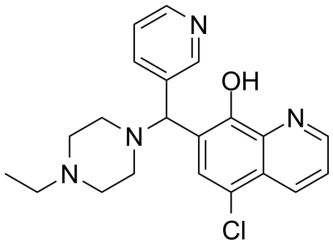
BRD 4354

Cat. No.:	HY-112719
CAS No.:	315698-07-8
Molecular Formula:	$C_{21}H_{23}ClN_4O$
Molecular Weight:	382.89
Target:	HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 12.5 mg/mL (32.65 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6117 mL	13.0586 mL	26.1172 mL
	5 mM	0.5223 mL	2.6117 mL	5.2234 mL
	10 mM	0.2612 mL	1.3059 mL	2.6117 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: ≥ 1.25 mg/mL (3.26 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (3.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BRD 4354 is a moderately potent inhibitor of HDAC5 and HDAC9, with IC_{50}s of 0.85 and 1.88 μM, respectively.

IC_{50} & Target

HDAC5	HDAC9
0.85 μM (IC_{50})	1.88 μM (IC_{50})

In Vitro

BRD 4354 is a moderately potent inhibitor of HDAC5 and HDAC9, with BRD4354 having half-maximum inhibitory concentrations (IC_{50}) of 0.85 μM and 1.88 μM, respectively. BRD 4354 also inhibits HDACs 4, 6, 7, and 8 at higher concentrations (3.88-13.8 μM) but demonstrates less of an inhibitory effect on other class I HDACs 1, 2, and 3 (IC_{50}>40 μM) [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

A549 adenocarcinoma cells were treated with BRD 4354 for 24 h at 10 μM, and the top 50 upregulated and top 50 down regulated genes are compared to other compound treatments involving drugs, bioactive compounds with established MoA, and novel synthetic compounds[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Boskovic ZV, ET AL. Inhibition of Zinc-Dependent Histone Deacetylases with a Chemically Triggered Electrophile. ACS Chem Biol. 2016 Jul 15;11(7):1844-51.

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