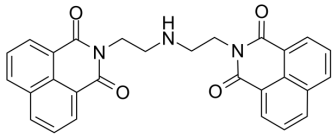
M-31850

Cat. No.:	HY-104050
CAS No.:	281224-40-6
Molecular Formula:	$C_{28}H_{21}N_3O_4$
Molecular Weight:	463.48
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5 mg/mL (10.79 mM; ultrasonic and adjust pH to 6 with HCl)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1576 mL	10.7880 mL	21.5759 mL
	5 mM	0.4315 mL	2.1576 mL	4.3152 mL
	10 mM	0.2158 mL	1.0788 mL	2.1576 mL

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

BIOLOGICAL ACTIVITY

Description

M-31850 is a potent, selective and competitive β-hexosaminidase (Hex) inhibitor with IC_{50}s of 6.0 μM and 3.1 μM for human HexA and human HexB, respectively. M-31850 also competitively inhibits β-N-acetyl-D-hexosaminidase OfHex2 with a K_i of 2.5 μM[1][2].

IC_{50} & Target

IC50: 6.0 μM (human HexA) and 3.1 μM (human HexB)[1].
Ki: 2.5 μM (OfHex2)[2]

In Vitro

M-31850 shows some activity towards Jack Bean Hex (JBHex) and bacterial Hex from Streptomyces plicatus (SpHex) (IC_{50} of 280 μM and >500 μM for JBHex and SpHex, respectively)[1].
M-31850 produces a dose dependent increase in MUG hydrolysis (Hex S levels) in lysates from treated infantile Sandhoff disease (ISD) cells[1].
M-31850 increases the half-life of the mutant Hex A from Adult forms of Tay-Sachs (ATSD) cells more than two-fold at 44° C, relative to the enzyme heated in the presence of DMSO. M-31850 acts as a classic competitive inhibitor of Hex (K_m increases and V_{max} is unaffected by increasing amounts of M-31850), with a K_i of 0.8 μM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Michael B Tropak, et al. High-throughput screening for human lysosomal beta-N-Acetyl hexosaminidase inhibitors acting as pharmacological chaperones. Chem Biol. 2007 Feb;14(2):153-64.

[2]. Qi Chen, et al. Exploring unsymmetrical dyads as efficient inhibitors against the insect β-N-acetyl-D-hexosaminidase OfHex2. Biochimie. 2014 Feb;97:152-62.

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