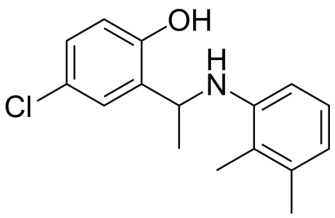
MFI8

Cat. No.:	HY-150031
CAS No.:	694488-83-0
Molecular Formula:	$C_{16}H_{18}ClNO$
Molecular Weight:	275.77
Target:	Mitochondrial Metabolism
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (362.62 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.6262 mL	18.1311 mL	36.2621 mL
	5 mM	0.7252 mL	3.6262 mL	7.2524 mL
	10 mM	0.3626 mL	1.8131 mL	3.6262 mL

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

BIOLOGICAL ACTIVITY

Description

MFI8 is a small molecule inhibitor of mitochondrial[1].

IC_{50} & Target

Mitofusin[1]

In Vitro

MFI8 (20 μM; 6 h) reduces significantly mitochondrial aspect ratio with an EC_{50} of 4.8 μM, and inhibits mitochondrial function via mitofusins and subsequently promoting mitochondrial fission[1].

MFI8 possesses functional groups that meet the criteria of the pharmacophore model to interact with mitofusins and promotes mitochondrial fission[1].

MFI8 binds to the HR2 domain of MFN2, modulates MFN conformation and complexes, and alters mitochondrial functionality[1].

MFI8 (0-20 μM; 6 h) concentration-responsively increases caspase-3/7 activity, induces cytochrome c release and decreases membrane potential in a mitofusin-dependent manner. MFI8 also induces DNA damage and induces cell death in combination with BV6 SMAC (second mitochondria-derived activator of caspases) mimetic[1].

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

CUSTOMER VALIDATION

- Nat Commun. 2023 Jul 28;14(1):4557.

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REFERENCES

[1]. Zacharioudakis E, et al. Modulating mitofusins to control mitochondrial function and signaling. Nat Commun. 2022 Jul 7;13(1):3775.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA