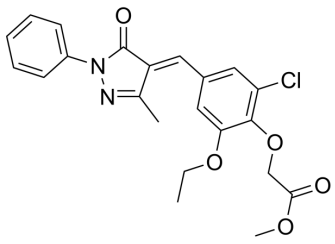
SJ-172550

Cat. No.:	HY-16664
CAS No.:	431979-47-4
Molecular Formula:	$C_{22}H_{21}ClN_2O_5$
Molecular Weight:	428.87
Target:	MDM-2/p53; E1/E2/E3 Enzyme
Pathway:	Apoptosis; Metabolic Enzyme/Protease
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 : 33.33 mg/mL (77.72 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3317 mL	11.6585 mL	23.3171 mL
	5 mM	0.4663 mL	2.3317 mL	4.6634 mL
	10 mM	0.2332 mL	1.1659 mL	2.3317 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SJ-172550 is a small molecule inhibitor of MDMX; competes for the wild type p53 peptide binding to MDMX with an EC_{50} of 5 μM.

IC_{50} & Target

IC50: 5 μM (MDMX)[1]

In Vitro

The p53 pathway is disrupted in virtually every human tumor. SJ-172550 binds the p53-binding pocket of MDMX, thereby displacing p53. SJ-172550 binds reversibly to MDMX and effectively kills retinoblastoma cells in which the expression of MDMX is amplified. The effect of SJ-172550 is additive when combined with an MDM2 inhibitor nutlin-3a[1]. SJ-172550 acts through a complicated mechanism in which the compound forms a covalent but reversible complex with MDMX and locks MDMX into a conformation that is unable to bind p53. The relative stability of this complex is influenced by many factors including the reducing potential of the media, the presence of aggregates[2].

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

CUSTOMER VALIDATION

- Theranostics. 2023 May 8;13(9):2787-2799.

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REFERENCES

[1]. Reed D, et al. Identification and characterization of the first small molecule inhibitor of MDMX. J Biol Chem. 2010 Apr 2;285(14):10786-96.

[2]. Bista M, et al. On the mechanism of action of SJ-172550 in inhibiting the interaction of MDM4 and p53. PLoS One. 2012;7(6):e37518.

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