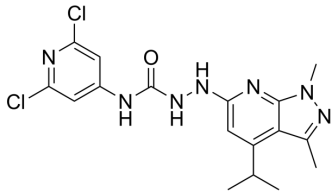
JTE-013

Cat. No.:	HY-100675
CAS No.:	383150-41-2
Molecular Formula:	$C_{17}H_{19}Cl_2N_7O$
Molecular Weight:	408.29
Target:	LPL Receptor; Apoptosis
Pathway:	GPCR/G Protein; Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 1 year -20°C 6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (244.92 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4492 mL	12.2462 mL	24.4924 mL
5 mM	0.4898 mL	2.4492 mL	4.8985 mL
10 mM	0.2449 mL	1.2246 mL	2.4492 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: ≥ 0.83 mg/mL (2.03 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 0.83 mg/mL (2.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

JTE-013 is a potent and specific $S1P_2$ (Sphingosine-1-Phosphate 2; EDG-5) antagonist. JTE-013 inhibits the specific binding of radiolabeled S1P to human and rat $S1P_2$ with IC_{50}s of 17 nM and 22 nM, respectively[1].

IC_{50} & Target

IC50: 17 nM ($S1P_2$ for human) and 22 nM ($S1P_2$ for rat)[1]

In Vitro

JTE-013 (50-200 μM; 1-3 days) reduces cell viability[1].
?JTE-013 (10-1000 nM; 30 mins) reverses S1P-induced Akt inhibition and inhibits S1P-induced ERK activation[1].
?JTE-013 displays 4.2% inhibition of $S1P_3$ and does not antagonize $S1P_1$ at concentrations up to 10 μM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	SK-N-AS cells
Concentration:	50, 100, 150, 200 μM
Incubation Time:	1-3 days
Result:	Reduced cell viability.

Western Blot Analysis[1]

Cell Line:	SK-N-AS cells
Concentration:	10, 100, 1000 nM
Incubation Time:	30 mins
Result:	Reversed S1P-induced Akt inhibition and inhibited S1P-induced ERK activation.

In Vivo

JTE-013 (gavage; 30 mg/kg daily for 14 consecutive days) reduces tumor size and tumor weight[1].

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

Animal Model:	Six-week-old female athymic NCr-nu/nu nude mice[1]
Dosage:	30 mg/kg
Administration:	Gavage; daily for 14 consecutive days
Result:	Reduced tumor size and tumor weight.

CUSTOMER VALIDATION

- Nat Commun. 2023 Mar 9;14(1):1305.
- Exp Ther Med. 2018 Jun;15(6):5007-5016.
- Discov Oncol. 2023 Jan 11;14(1):4.

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REFERENCES

[1]. Li MH, et al. Antitumor Activity of a Novel Sphingosine-1-Phosphate 2 Antagonist, AB1, in Neuroblastoma. J Pharmacol Exp Ther. 2015 Sep;354(3):261-8.

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