PTC-209 hydrobromide

Cat. No.: HY-15888A

CAS No.: 1217022-63-3

Molecular Formula: $C_{17}H_{14}Br_3N_5OS$

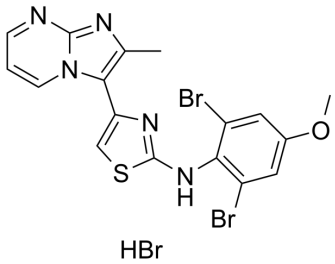
Molecular Weight: 576.1

Target: Autophagy

Pathway: Autophagy

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (173.58 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7358 mL	8.6790 mL	17.3581 mL
	5 mM	0.3472 mL	1.7358 mL	3.4716 mL
	10 mM	0.1736 mL	0.8679 mL	1.7358 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: 2.5 mg/mL (4.34 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (4.34 mM); Clear solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (4.34 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

PTC-209 hydrobromide is a specific BMI-1 inhibitor with an IC_{50} of 0.5 μM in HEK293T cell line. PTC-209 hydrobromide irreversibly impairs colorectal cancer-initiating cells (CICs). PTC-209 hydrobromide shows potent anti-myeloma activity and impairs the tumor microenvironment[1][2].

IC_{50} & Target

IC50: 0.5 μM (BMI-1, in HT1080 tumor cells)[1]

In Vitro

PTC-209 (0.01-10 μM; 24-72 hours) induces a concentration- and time-dependent decrease in the cellular viability of all cell lines tested[2].

PTC-209 (1-2.5 μM) inhibits STAT3 phosphorylation in A549 lung cancer cells and MDA-MB-231 breast cancer cells[2].

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

Cell Viability Assay[2]

Cell Line:	Lung (LNM35, A549 cells), breast (MDA-MB-231 and T47D cells), and colon (HT-29, HCT-116, and HCT8/S11 cells)
Concentration:	0.01-10 μM
Incubation Time:	24, 48, and 72 hour
Result:	Induced a concentration- and time-dependent decrease in the cellular viability of all cell lines tested.

In Vivo

PTC-209 (60 mg/kg body weight; subcutaneously; once a day for 11 days) significantly reduces tumor volume[2].

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

Animal Model:	Nude mice (male, aged 8-10 weeks, HCT1116 cell-derived tumor)[1]
Dosage:	60 mg/kg body weight
Administration:	Subcutaneously; once a day for 11 days
Result:	Significantly reduced tumor volume.

CUSTOMER VALIDATION

- Cell Stem Cell. 2017 May 4;20(5):621-634.e6.
- Nat Commun. 2018 Feb 5;9(1):500.
- Acta Biomater. 2023 Aug 17;S1742-7061(23)00482-8.
- Pharmacol Res. 2020 Dec 8;105365.
- Oncogene. 2020 Jan;39(1):17-29.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Kreso A, et al. Self-renewal as a therapeutic target in human colorectal cancer. Nat Med. 2014 Jan;20(1):29-36.

[2]. Christian Mayr, et al. The BMI1 inhibitor PTC-209 is a potential compound to halt cellular growth in biliary tract cancer cells. Oncotarget. 2016 Jan 5; 7(1): 745-758.

[3]. Shahi MH, et al. BMI1 is expressed in canine osteosarcoma and contributes to cell growth and chemotherapy resistance. PLoS One. 2015 Jun 25;10(6):e0131006.

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