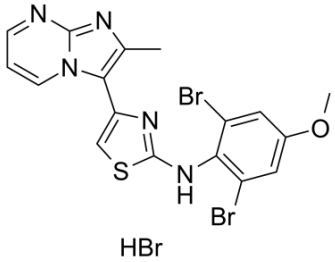
PTC-209 hydrobromide

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:	Please store the product under the recommended conditions in the Certificate of Analysis.



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.
- Oncogene. 2020 Jan;39(1):17-29.
- Pharmacol Res. 2020 Dec 8;105365.
- Front Oncol. 2021 Mar 22;11:620295.

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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.

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