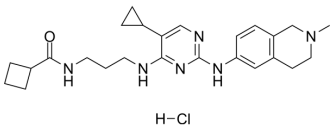
MRT68921 hydrochloride

Cat. No.:	HY-100006B
CAS No.:	2070014-87-6
Molecular Formula:	$C_{25}H_{35}ClN_6O$
Molecular Weight:	471.04
Target:	ULK
Pathway:	Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	MRT68921 hydrochloride is a potent inhibitor of ULK1 and ULK2, with IC_{50} values of 2.9 nM and 1.1 nM, respectively.
In Vitro	ULK1, a serine/threonine protein kinase, is essential for the initial stages of autophagy. MRT68921 inhibits ULK1 and ULK2 in vitro and block autophagy in cells. MRT68921 is the most potent inhibitor of both ULK1 and ULK2, with greater than a 15-fold reduction in the IC_{50} for ULK1 (2.9 nm) and greater than a 30-fold reduction for ULK2 (1.1 nm). Autophagy-inhibiting capacity of the compounds is specifically through ULK1. ULK1 inhibition results in accumulation of stalled early autophagosomal structures, indicating a role for ULK1 in the maturation of autophagosomes as well as initiation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Nature. 2022 Oct;610(7931):366-372.
- Cancer Cell. 2021 May 10;39(5):678-693.e11.
- Nature Cancer. 2021 May;2(5):503-514.
- Mol Ther Oncolytics. 28 August 2021.
- J Cell Physiol. 2021 Dec;236(12):8110-8121.

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REFERENCES

[1]. Petherick KJ, et al. Pharmacological inhibition of ULK1 kinase blocks mammalian target of rapamycin (mTOR)-dependent autophagy. J Biol Chem. 2015 May 1;290(18):11376-83.

Caution: Product has not been fully validated for medical applications. For research use only.

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