BMT-090605 hydrochloride

Cat. No.: HY-101290A

CAS No.: 2231664-45-0

Molecular Formula: $C_{21}H_{25}ClN_4O_2$

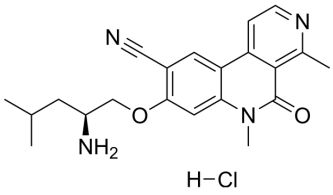
Molecular Weight: 400.9

Target: Cyclin G-associated Kinase (GAK); AAK1

Pathway: Cell Cycle/DNA Damage; Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 31.25 mg/mL (77.95 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4944 mL	12.4719 mL	24.9439 mL
	5 mM	0.4989 mL	2.4944 mL	4.9888 mL
	10 mM	0.2494 mL	1.2472 mL	2.4944 mL

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

BIOLOGICAL ACTIVITY

Description

BMT-090605 hydrochloride is a potent, selective the adapter protein-2 associated kinase 1 (AAK1) inhibitor with an IC_{50} value of 0.6 nM. BMT-090605 hydrochloride shows antinociceptive activity. BMT-090605 hydrochloride inhibits BMP-2-inducible protein kinase (BIKE) and Cyclin G-associated kinase (GAK) with IC_{50} values of 45 nM and 60 nM, respectively. BMT-090605 hydrochloride can be used for the research of neuropathic pain[1].

IC_{50} & Target

IC50: 0.6 nM (AAK1); 45 nM (BIKE); 60 nM (GAK)[1]

In Vitro

BMT-090605 hydrochloride shows AAK1inhibitory activity with an IC_{50} of 0.63 nM[1].
BMT-090605 hydrochloride inhibits BMP-2-inducible protein kinase (BIKE) and Cyclin G-associated kinase (GAK) with IC_{50} values of 45 nM and 60 nM, respectively[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

BMT-090605 hydrochloride(intrathecal; 0.3-3 μg/rat) causes antinociception by inhibiting AAK1 in the spinal cord[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Sprague-Dawley rats (chronic constriction injury (CCI) model)[1]
Dosage:	0.3-3 μg/rat
Administration:	Intrathecal
Result:	Caused a dose-dependent reduction in thermal hyperalgesia.

REFERENCES

[1]. Kostich W, et al. Inhibition of AAK1 Kinase as a Novel Therapeutic Approach to Treat Neuropathic Pain. J Pharmacol Exp Ther. 2016 Sep;358(3):371-86.

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