Asciminib hydrochloride

Cat. No.: HY-104010A

CAS No.: 2119669-71-3

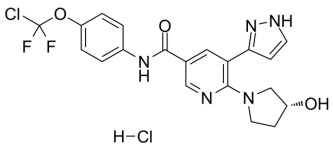
Molecular Formula: $C_{20}H_{19}Cl_2F_2N_5O_3$

Molecular Weight: 486.3

Target: Bcr-Abl

Pathway: Protein Tyrosine Kinase/RTK

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 (205.63 mM; Need ultrasonic)
H_2O : < 0.1 mg/mL (ultrasonic) (insoluble)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	2.0563 mL	10.2817 mL	20.5634 mL
5 mM	0.4113 mL	2.0563 mL	4.1127 mL
10 mM	0.2056 mL	1.0282 mL	2.0563 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 (5.14 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.14 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.14 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Asciminib (ABL001) hydrochloride is a potent and selective allosteric BCR-ABL1 inhibitor, which inhibits Ba/F3 cells grown with an IC_{50} of 0.25 nM[1].

In Vitro

Asciminib (ABL001) hydrochloride binds to the myristoyl pocket of ABL1 and induces the formation of an inactive kinase conformation[1].
Asciminib hydrochloride binds potently (dissociation constant=0.5-0.8 nM) and selectively to the myristoyl pocket of ABL1 and induces the inactive C-terminal helix conformation. Asciminib hydrochloride exhibits the same non-ATP-competitive biochemical kinetics as the BCR–ABL inhibitor GNF-2 but with approximately 100-fold greater potency[1].

	Asciminib hydrochloride lacks activity against more than 60 kinases, including SRC, and is similarly inactive against G-protein-coupled receptors, ion channels, nuclear receptors and transporters[1]. In BCR–ABL1-transformed Ba/F3 cells grown without IL-3, Asciminib hydrochloride has an anti-proliferative with IC_{50} value of 0.25 nM. In the CML blast-phase cell line KCL-22, Asciminib hydrochloride inhibits phosphorylation of both STAT5 (Tyr694; pSTAT5) and BCR–ABL1 (Tyr245; pBCR–ABL1) after 1 h using concentrations that correlate with those required for inhibition of cell proliferation[1]. Asciminib hydrochloride is selectively active against all BCR–ABL1 lines (IC_{50} value of 1–20 nM), irrespective of the presence of either the p210 or the p190 BCR–ABL1 isoform[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Single doses of 7.5, 15 and 30 mg/kg Asciminib, administered to mice bearing KCL- 22 xenografts, inhibits pSTAT5 (Tyr694), which return to baseline at 10, 12 and 16-20 h after administration of the dose, respectively. In mice implanted with KCL-22 tumors, the minimum dose of Asciminib required for complete regression is 7.5 mg/kg twice a day (BID) or 30 mg/kg once a day (QD), and is tolerated at doses up to 250 mg/kg BID[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2021 Sep 25;12(10):875.
- Cancer Immunol Immunother. 2023 Jan 5.
- J Biol Chem. 2022 Aug;298(8):102238.
- BMC Cancer. 2020 May 7;20(1):397.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Wylie AA, et al. The allosteric inhibitor ABL001 enables dual targeting of BCR-ABL1. Nature. 2017 Mar 30;543(7647):733-737.

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