AZ-23

Cat. No.: HY-15590

CAS No.: 915720-21-7

Molecular Formula: $C_{17}H_{19}ClFN_7O$

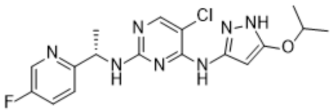
Molecular Weight: 391.83

Target: Trk Receptor

Pathway: Neuronal Signaling; Protein Tyrosine Kinase/RTK

Storage:

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (319.02 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.5521 mL	12.7606 mL	25.5213 mL
5 mM	0.5104 mL	2.5521 mL	5.1043 mL
10 mM	0.2552 mL	1.2761 mL	2.5521 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: ≥ 2.08 mg/mL (5.31 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

AZ-23 is an ATP-competitive and orally bioavailable Trk kinase A/B/C inhibitor with IC_{50}s of 2 nM (TrkA), 8 nM (TrkB), 24 nM (FGFR1), 52 nM (Flt3), 55 nM (Ret), 84 nM (MuSk), 99 nM (Lck), respectively.

IC_{50} & Target

TrkA	TrkB
2 nM (IC_{50})	8 nM (IC_{50})

In Vitro

AZ-23 potently and selectivity inhibits Trk phosphorylation in cells. AZ-23 potently inhibits Trk-mediated survival (EC_{50} of 2 nM). AZ-23 Inhibits Trk-Dependent Survival in MCF10ATrkA-Δ and TF-1 Cell Lines[1].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	AZ-23 shows in vivo TrkA kinase inhibition and efficacy in mice following oral administration in a TrkA-driven allograft model and significant tumor growth inhibition in a Trk-expressing xenograft model of neuroblastoma[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Exponentially growing TF-1 cells are treated with various concentrations of AZ-23 and then incubated for an additional 72 h at 37°C in either growth or basal medium plus 100 ng/mL NGF. Cell proliferation is measured using MTS solution[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	Mice[1] Tumor-bearing mice are given a single, oral dose of compound and individual mice are sacrificed at various time points postdose (2, 6, 16, or 24 hours). Tumors are excised and homogenized and the resulting tumor lysates are analyzed using an ELISA for pTrkA[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Sci Transl Med. 2018 Jul 18;10(450):eaaq1093.
- Mol Cell Proteomics. 2022 Apr;21(4):100221.
- Mol Cell Proteomics. 26 February 2022, 100221.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Thress K, et al. Identification and preclinical characterization of AZ-23, a novel, selective, and orally bioavailable inhibitor of the Trk kinase pathway. Mol Cancer Ther. 2009 Jul; 8(7):1818-27.

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

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