JH-VIII-157-02

Cat. No.: HY-112140

CAS No.: 1639422-97-1

Molecular Formula: $C_{28}H_{27}N_5O_2$

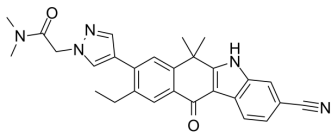
Molecular Weight: 465.55

Target: Anaplastic lymphoma kinase (ALK)

Pathway: Protein Tyrosine Kinase/RTK

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 25 mg/mL (53.70 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1480 mL	10.7400 mL	21.4800 mL
5 mM	0.4296 mL	2.1480 mL	4.2960 mL
10 mM	0.2148 mL	1.0740 mL	2.1480 mL

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

BIOLOGICAL ACTIVITY

Description

JH-VIII-157-02 is a structural analogue of alectinib, acts as an ALK inhibitor, and shows an IC_{50} of 2 nM for echinoderm microtubule-associated protein-like 4-ALK (EML4-ALK) G1202R in cells.

IC_{50} & Target

IC50: 2 nM (EML4-ALK G1202R, cell assay), 2 nM (EML4-ALK^{wt}, cell assay), 2 nM (EML4-ALK C1156Y, cell assay), 2 nM (EML4-ALK F1174L, cell assay), 2 nM (EML4-ALK F1174L, cell assay)[1]

In Vitro

JH-VIII-157-02 is a structural analogue of alectinib, acts as an ALK inhibitor, and shows an IC_{50} of 2 nM for echinoderm microtubule-associated protein-like 4-ALK (EML4-ALK) G1202R in cells. JH-VIII-157-02 also potently inhibits EML4-ALK^{wt} (Eawt), EAC1156Y, EAF1174L, EAS1206Y (IC_{50}, 2 nM), EAG1269A (IC_{50}, 3 nM), EAL1196M (IC_{50}, 58 nM), EA1151Tins (IC_{50}, 107 nM), and EAL1152R (IC_{50}, 196 nM). Moreover, JH-VIII-157-02 has selectivity at other kinases, including IRAK1, CLK4, RET, RET V804L, RET V804M and IRAK 4, and the IC_{50}s are 14 nM, 14 nM, 3 nM, 13 nM, 12 nM, and 465 nM respectively. JH-VIII-157-02 exhibits inhibitory growth of cancer cell lines, such as H3122, DFCI76 (L1152R] with EC_{50}s of 5, 19 nM, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	JH-VIII-157-02 exhibits good oral bioavailability following an oral dose of 10 mg/kg in mice. JH-VIII-157-02 also penetrates the CNS of mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	Cells are seeded at 4000 per well in 96 well plates and exposed to JH-VIII-157-02 in triplicate at 1 nM to 10 μM for 72 hours. Cell viability is evaluated using CellTiter-Glo Luminescent Cell Viability Assay. IC_{50} values are calculated by nonlinear regression (variable slope) using GraphPad Prism 5 software. Each experiment is repeated for at least twice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Hatcher JM, et al. Discovery of Inhibitors That Overcome the G1202R Anaplastic Lymphoma Kinase Resistance Mutation. J Med Chem. 2015 Dec 10;58(23):9296-9308.

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