Cevidoplenib

Cat. No.: HY-109082

CAS No.: 1703788-21-9

Molecular Formula: $C_{25}H_{27}N_7O_3$

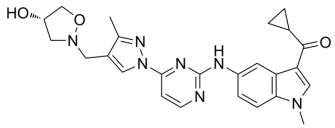
Molecular Weight: 473.53

Target: Syk

Pathway: Protein Tyrosine Kinase/RTK

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 : 50 mg/mL (105.59 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1118 mL	10.5590 mL	21.1180 mL
5 mM	0.4224 mL	2.1118 mL	4.2236 mL
10 mM	0.2112 mL	1.0559 mL	2.1118 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 (5.28 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (5.28 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Cevidoplenib (SKI-O-703) is an orally available inhibitor of spleen tyrosine kinase (Syk), with potential anti-inflammatory and immunomodulating activities. Cevidoplenib is also the mesylate form of SKI-O-592. Cevidoplenib and SKI-O-592 inhibits BCR-mediated survival, proliferation, and differentiation of B cells. And SKI-O-592 potently inhibits multiple kinases with IC_{50}s of 6.2 nM (Syk), 1.859 μM (Jak2), 5.807 μM (Jak3), 0.412 μM (RET), 0.687 μM (KOR), 1.783 μM (FLT3), 16.96 μM (FGFR1), 5.662 μM (FGFR3), and 0.709 μM (Pyk2), respectively[1][2][3].

IC_{50} & Target

IC50: 6.2 nM (Syk), 1.859 μM (Jak2), 5.807 μM (Jak3), 0.412 μM (RET), 0.687 μM (KOR), 1.783 μM (FLT3), 16.96 μM (FGFR1), 5.662 μM (FGFR3), and 0.709 μM (Pyk2)[3]

In Vivo

Upon oral administration, cevidoplenib binds to and inhibits the activity of SYK, blocking Fc receptor and B-cell receptor

(BCR)-mediated signaling in inflammatory cells, including macrophages, neutrophils, mast cells, natural killer (NK) cells and B cells[2].

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

REFERENCES

[1]. Cho S, et al. A novel selective spleen tyrosine kinase inhibitor SKI-O-703 (cevidoplenib) ameliorates lupus nephritis and serum-induced arthritis in murine models. Clin Exp Immunol. 2023 Mar 8;211(1):31-45.

[2]. International Nonproprietary Names for Pharmaceutical Substances (INN). WHO Drug Information, Vol. 31, No. 4, 2017.

[3]. cevidoplenib dimesylate.

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