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Product Data Sheet

Seletalisib

Cat. No.: HY-16754

CAS No.: 1362850-20-1Molecular Formula: $C_{23}H_{14}ClF_3N_6O$

Molecular Weight: 482.85

Target: PI3K

Pathway: PI3K/Akt/mTOR

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 : ≥ 83.3 mg/mL (172.52 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	2.0710 mL	10.3552 mL	20.7104 mL
	5 mM	0.4142 mL	2.0710 mL	4.1421 mL
	10 mM	0.2071 mL	1.0355 mL	2.0710 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.18 mM); Clear solution

BIOLOGICAL ACTIVITY

 Description
 Seletalisib (UCB5857) is potent and selective PI3Kδ inhibitor with an IC₅₀ of 12 nM.

 IC₅₀ & Target
 PI3Kδ 12 nM (IC₅₀)

 In Vitro
 Seletalisib is a potent, ATP-competitive and highly selective PI3Kδ inhibitor able to block AKT phosphorylation following activation of the BCR in a B-cell line. Seletalisib inhibits N-formyl peptides (fMLP)-stimulated but not phorbol myristate acetate (PMA)-stimulated superoxide release from human neutrophils consistent with a PI3Kδ-specific activity. No indications of cytotoxicity are observed in PBMCs or other cell types treated with seletalisib. seletalisib blocks human T-cell

production of several cytokines from activated T-cells. Seletalisib inhibits T-cell differentiation to Th1, Th2, and Th17 subtypes. Additionally, seletalisib inhibits B-cell proliferation and cytokine release. In human whole blood assays, seletalisib

	inhibits CD69 expression upon B-cell activation and anti-IgE-mediated basophil degranulation ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Seletalisib significantly inhibits IL-2 release following TCR stimulation in the rat. The inhibition is observed at all tested doses of seletalisib with almost complete inhibition reached at dose levels ≥1 mg/kg. Seletalisib has potent in vivo effects with an estimated IC ₅₀ value of <10 nM ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]

Seletalisib is dissolved 1 mM solution in DMSO, and tested in a concentration response (seletalisib), to explore the effects of PI3K δ -specific inhibition compared with complete inhibition of class I PI3K signaling. In addition, seletalisib is tested in the BioMap BT cell system at concentrations of 1000, 100, 10, and 1 nM. An activity profile is generated based on the effect of the compounds on the levels of cellular readouts, including cytokines, growth factors, adhesion molecules, and proliferation endpoints^[1].

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

Animal
Administration [1]

Rats: Rats are dosed with seletalisib (0.1-10 mg/kg in 500 μ L volume) or vehicle via oral gavage 30 min prior to i.v. administration of anti- CD3 antibody administered in a 200 μ L dose volume. The vehicle is methylcellulose or saline for oral and i.v. administration, respectively. Seletalisib levels and IL-2 levels are measured^[1].

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

CUSTOMER VALIDATION

• Cells. 2021, 10(10), 2636.

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REFERENCES

[1]. Allen RA, et al. Seletalisib: Characterization of a Novel, Potent, and Selective Inhibitor of PI3Kδ. J Pharmacol Exp Ther. 2017 Apr 25. pii: jpet.116.237347.

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

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