PI3K/mTOR Inhibitor-13

Cat. No.: HY-153120

CAS No.: 1621718-37-3

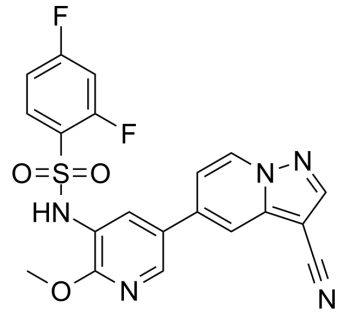
Molecular Formula: $C_{20}H_{13}F_2N_5O_3S$

Molecular Weight: 441.41

Target: PI3K; mTOR

Pathway: PI3K/Akt/mTOR

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

PI3K/mTOR Inhibitor-13 is an orally active dual inhibitor of phosphoinositol 3-kinase (PI3K) and mTOR kinase. PI3K/mTOR Inhibitor-13 has potential applications in sexual diseases, solid tumor and idiopathic pulmonary fibrosis (IPF)[1][2].

In Vitro

PI3K/mTOR Inhibitor-13 (Compound A) (0-2 μM; 48 h) inhibits the proliferation of HFL1 cells with dose-dependent manner[1].

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

Cell Proliferation Assay[1]

Cell Line:	HFL1 cells.
Concentration:	0, 0.03125, 0.0125, 0.025, 0.05, 0.0625, 0.1, 0.125, 0.2, 0.25, 0.4, 0.5, 1 and 2 μM.
Incubation Time:	48 h.
Result:	Showed inhibitory for HFL1 cells.

Western Blot Analysis[1]

Cell Line:	HFL1 cells.
Concentration:	200 nM.
Incubation Time:	48 h.
Result:	Increased the expression of α-SMA/Tubulin.

In Vivo

Pharmacokinetic (PK) parameters of PI3K/mTOR Inhibitor-13[2]

Species	Administration manner	Dose (mg/kg)	$T_{1/2}$ (h)	AUC_{last} (ng•h/mL)	Cl/F (L/h/kg)	V_{ss} (L/kg)	F (%)
Rat	Intravenous injection	2	2.77	7069	0.29	0.85	94.75

Mice	Intravenous injection	1	5.45	57059	0.02	0.13	79.3
Dog	Intravenous injection	1	0.67	3672	0.27	0.23	108.5
Monkey	Intravenous injection	1	9.70	5978	0.16	0.92	59.8

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

REFERENCES

[1]. Cao S, et al. Pharmaceutical combination or pharmaceutical composition for treatment of fibrotic diseases. World Intellectual Property Organization. WO2020078445.

[2]. Xi N, et al. Aromatic heterocyclic compounds, pharmaceutical composition containing compounds and application of pharmaceutical composition.China.CN103965199.

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