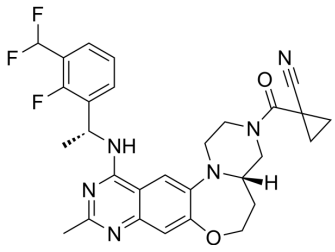
SOS1-IN-14

Cat. No.:	HY-151517
CAS No.:	2793405-20-4
Molecular Formula:	$C_{29}H_{29}F_3N_6O_2$
Molecular Weight:	550.57
Target:	Ras
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (454.07 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8163 mL	9.0815 mL	18.1630 mL
	5 mM	0.3633 mL	1.8163 mL	3.6326 mL
	10 mM	0.1816 mL	0.9081 mL	1.8163 mL

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

BIOLOGICAL ACTIVITY

Description

SOS1-IN-14 is a potent, selective and orally active SOS1 inhibitor with an IC_{50} value of 3.9 nM. SOS1-IN-14 can be absorbed in the intestine via a P-glycoprotein-mediated efflux mechanism. SOS1-IN-14 can be used to research KRAS-mutated cancers. SOS1-IN-14 has better potent tumor suppression than BI-3406 (HY-125817)[1].

IC_{50} & Target

IC_{50}: 3.9 nM (SOS1)[1]

In Vitro

SOS1-IN-14 (compound 13c) exhibits cellular SOS1 inhibition with an IC_{50} of 21 nM[1].
SOS1-IN-14 has certain inhibition for CYP2D6, CYP2C9, CYP2C8 and CYP3A4 with IC_{50}s of 2.5 μM, 6.5 μM, 43.3 μM and 54.3 μM, respectively, indicating that it has a certain risk of drug-drug interaction[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

SOS1-IN-14 (50 mg/kg; p.o.; qd) exhibits 83.0% tumor suppression in Mia-paca-2 pancreas xenograft mice tumor models[1].
SOS1-IN-14 shows a favorable pharmacokinetic profile with a bioavailability of 86.8% in beagles[1].
Pharmacokinetic Parameters of SOS1-IN-14 (compound 13c) in ICR mice, Sprague-Dawley rats and Beagle dogs[1].

	ICR Mice	Sprague–Dawley Rats		Beagle Dogs	
Administration	p.o., 50 mg/kg	i.v., 2 mg/kg	p.o., 10 mg/kg	i.v., 2 mg/kg	p.o., 20 mg/kg
T_{max} (h)	0.5	0.08	3	0.08	2
$T_{1/2}$ (h)	4.61	1.17	2.32	3.83	6.68
C_{max} (μg/mL)	2670	1261	265	568	1840
AUC_{0-24} (ng/mL·h)	32300	970	1683	2962	25725
CL (mL/min/kg)	/	2068	/	11.3	/
V_{ss} (L/kg)	/	2126	/	3.88	/
F (%)	/	/	34.5	/	86.8
K_{el} (h^{-1})	0.265	/	/	/	/
MRT (h)	4.67	/	/	/	/

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

Animal Model:	BALB/c nude mice (KRAS G12C variant Mia-paca-2 xenograft models)[1]
Dosage:	50 mg/kg
Administration:	p.o.; q.d., for 21 days
Result:	Exhibited 83.0% tumor suppression. Showed better potent tumor suppression than BI-3406 (HY-125817).

REFERENCES

[1]. He H, et al. Discovery of Orally Bioavailable SOS1 Inhibitors for Suppressing KRAS-Driven Carcinoma. J Med Chem. 2022 Sep 29.

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