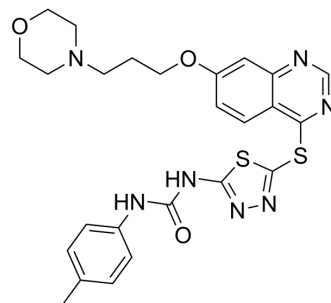


SKLB4771

Cat. No.:	HY-12960		
CAS No.:	1370256-78-2		
Molecular Formula:	C ₂₅ H ₂₇ N ₇ O ₃ S ₂		
Molecular Weight:	537.66		
Target:	FLT3; c-Kit; Apoptosis		
Pathway:	Protein Tyrosine Kinase/RTK; Apoptosis		
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 : 33.33 mg/mL (61.99 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		1.8599 mL	9.2996 mL	18.5991 mL
		5 mM		0.3720 mL	1.8599 mL	3.7198 mL
10 mM			0.1860 mL	0.9300 mL	1.8599 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.65 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (4.65 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.65 mM); Clear solution 					

BIOLOGICAL ACTIVITY

Description	SKLB4771 is a potent and selective Flt3 inhibitor with an IC ₅₀ value of 10 nM. SKLB4771 downregulates the phosphorylation of FLT3/STAT5/ERK, blocks cell proliferation, and induces apoptosis in tumor tissue ^{[1][2]} .
IC₅₀ & Target	IC ₅₀ : 10 nM (Flt3); 3.7 μM (Flt4); 1.5 μM (Aurora A); 6.8 μM (c-kit); 2.8 μM (FMS) ^[1]
In Vitro	SKLB4771 (compound 20c) (72 h) inhibits FLT3-ITD-expressing MV4-11 cells with an IC ₅₀ value of 6 nM, and inhibits other cancer cells with IC ₅₀ s of 3.05 μM (Jurkat), 6.25 μM (Ramos), 3.72 μM (PC-9), 6.94 μM (H292), and 8.91 μM (A431), respectively

[1].

SKLB4771 (0-300 nM; 20 h) inhibits FLT3 phosphorylation and also decreases the phosphorylation of the downstream signaling proteins STAT5 and ERK1/2 at concentrations >0.1 μM ^[1].

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

Western Blot Analysis^[1]

Cell Line:	MV4-11 cells
Concentration:	0, 30, 100, 300 nM
Incubation Time:	20 hours
Result:	Resulted inhibition against the human FLT3 kinase in a dose-dependent manner, and decreased the phosphorylation level of STAT5 and ERK1/2 at 100 nM and 300 nM.

In Vivo

SKLB4771 (20-100 mg/kg; i.p.; once daily; 21 d) inhibits tumor growth in vivo without significant weight loss or any other obvious signs of toxicity on mice^[1].

Pharmacokinetic Analysis of SKLB4771 in rat (40 mg/kg; i.p.)^[1]

C_{max} ($\mu\text{g/mL}$)	$T_{1/2}$ (h)	AUC_{max} ($\text{h}\cdot\mu\text{g/mL}$)	T_{max} (h)	CL_{obs} (L/h/kg)
5.31	13.9	21.86	1.0	2.21

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

Animal Model:	Female NOD-SCID mouse (6–7 weeks old) ^[1]
Dosage:	20, 40, 100 mg/kg; dissolved in 25% (v/v) PEG400 plus 5% DMSO, administered at a dose of 5 mL/kg
Administration:	Intraperitoneal injection; once daily; 21 days
Result:	Inhibited tumor growth by 66% and 84% at concentration of 20 mg/kg and 40 mg/kg, respectively. Resulted cell proliferation inhibition and apoptosis induction.

REFERENCES

[1]. Yan HX, et al. Accumulation of FLT3(+) CD11c (+) dendritic cells in psoriatic lesions and the anti-psoriatic effect of a selective FLT3 inhibitor. Immunol Res. 2014 Oct;60(1):112-26.

[2]. Li WW, et al. Discovery of the novel potent and selective FLT3 inhibitor 1-[5-[7-(3-morpholinopropoxy)quinazolin-4-ylthio]-[1,3,4]thiadiazol-2-yl]-3-p-tolylurea and its anti-acute myeloid leukemia (AML) activities in vitro and in vivo. J Med Chem. 2012 Apr 26;55(8):3852-66.

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

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