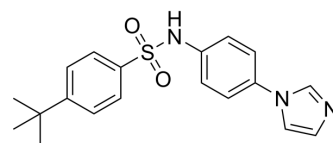


ISCK03

Cat. No.:	HY-101443		
CAS No.:	945526-43-2		
Molecular Formula:	C ₁₉ H ₂₁ N ₃ O ₂ S		
Molecular Weight:	355.45		
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 : ≥ 38 mg/mL (106.91 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.8133 mL	14.0667 mL	28.1334 mL
	5 mM		0.5627 mL	2.8133 mL	5.6267 mL
	10 mM		0.2813 mL	1.4067 mL	2.8133 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (7.03 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (7.03 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

ISCK03 is a SCF/c-Kit and CD117-specific inhibitor. ISCK03 significantly inhibits c-Kit phosphorylation at 10 μM^{[1][2][3]}.

In Vitro

Pretreatment of 501mel cells with ISCK03 inhibits SCF-induced c-kit phosphorylation dose dependently. ISCK03 also inhibits p44/42 ERK mitogen-activated protein kinase (MAPK) phosphorylation, which is known to be involved in SCF/c-kit downstream signaling. However ISCK03 does not inhibit hepatocyte growth factor (HGF)-induced phosphorylation of p44/42 ERK proteins^[1]. ISCK03, a tyrosine kinase inhibitor specific to KIT, prevents survival of CCDC26-KD cells under low-serum conditions. All treated cells exhibits sensitivity to ISCK03 in a dose-dependent manner. After ISCK03 treatment, the survival of KD cells is suppressed to the same level as that of non-KD cells. Conversely, ISCK03 treatment has limited effects on the growth of control K562 and KD clone 3-4 cells under high-serum concentration conditions^[2].
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Oral administration of ISCK03 induces the dose-dependent depigmentation of newly regrown hair, and this is reversed with cessation of ISCK03 treatment. The topical application of ISCK03 promotes the depigmentation of UV-induced hyperpigmented spots. Fontana-Masson staining analysis shows epidermal melanin is diminished in spots treated with ISCK03^[1].

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

PROTOCOL

Kinase Assay ^[1]

ATP is dispensed into 384-well plates, chemical compounds (ISCK03: 2.5, 5, 10, 100 μ M) are added by replicative plate, and recombinant human c-kit protein is added for the kinase reaction. Following a 45-min incubation at 37°C, the development reaction is carried out for 40 min at room temperature. After the reaction is stopped, the coumrain and fluorescein fluorescence-emission signals are detected^[1].

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

Cell Assay ^[1]

To determine any cytotoxic effects of ISCK03 on 501mel cells, MTT assays are performed with various doses of ISCK03 (1, 5, 10 μ M). 501mel cells are cultured with SCF alone (50 ng/mL) or SCF with ISCK03 for 48 h^[1].

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

Animal Administration ^[1]

Mice: To induce the hair cycle, depilation of skin on the back of the female C57BL/6 mice is performed. Briefly, the hair is removed from anesthetized mice. The rat antimouse c-kit-neutralizing monoclonal antibody ACK2 is administered intraperitoneally (50 mg) every day. ISCK03 is administered orally once a day. On days 21–28, animals are sacrificed or analyzed for repigmentation of the newly regrown hair shaft. Skin is harvested and fixed in paraffin or frozen for immunohistochemical analyses^[1].

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

CUSTOMER VALIDATION

- Front Cell Dev Biol. 2021 May 27;9:650599.
- Cell Cycle. 2020 Aug;19(16):2074-2080.

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