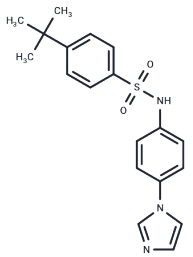
Data Sheet (Cat.No.T3452)

TargetMol

ISCK03

Chemical Properties



CAS No. : 945526-43-2

Formula: C19H21N3O2S

Molecular Weight: 355.45

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	ISCK03 is a selective SCF/c-Kit inhibitor.
Targets(IC50)	c-Kit
In vitro	Pretreatment with ISCK03 dose-dependently inhibits SCF-induced c-kit phosphorylation and p44/42 ERK (MAPK) phosphorylation, key components of SCF/c-kit signaling, without affecting HGF-induced phosphorylation of the same ERK proteins. As a specific tyrosine kinase inhibitor of KIT, ISCK03 effectively suppresses the survival of CCDC26-KD cells in low-serum environments, demonstrating dose-dependent sensitivity. While significantly impacting KD cells, reducing their survival to levels comparable with non-KD cells, ISCK03 shows minimal effects on the growth of control K562 and KD clone 3-4 cells in high-serum conditions.
In vivo	Administering ISCK03 orally causes a dose-dependent depigmentation of newly regrown hair, a process that reverses upon discontinuing the treatment. Topically applying ISCK03 effectively depigments UV-induced hyperpigmented spots. Fontana-Masson staining analysis reveals a reduction in epidermal melanin in areas treated with ISCK03[1].
Kinase Assay	ATP is dispensed into 384-well plates, chemical compounds (ISCK03: 2.5, 5, 10, 100 μM) 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].
Cell Research	To determine any cytotoxic effects of ISCK03 on 501mel cells, MTT assays are performed with various doses of ISCK03 (1, 5, 10 μM). 501mel cells are cultured with SCF alone (50 ng/mL) or SCF with ISCK03 for 48 h[1].

Solubility Information

Solubility	DMSO: 50 mg/mL (140.67 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
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
50 mM	0.0563 mL	0.2813 mL	0.5627 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Na YJ, et al. [4-t-butylphenyl]-N-(4-imidazol-1-yl phenyl)sulfonamide (ISCK03) inhibits SCF/c-kit signaling in 501mel human melanoma cells and abolishes melanin production in mice and brownish guinea pigs. Biochem Pharmacol. 2007 Sep 1;74(5):780-6.
Hirano T, et al. Long noncoding RNA, CCDC26, controls myeloid leukemia cell growth through regulation of KIT expression. Mol Cancer. 2015 Apr 19;14:90. doi: 10.1186/s12943-015-0364-7.

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