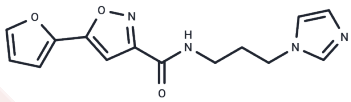
Data Sheet (Cat.No.T6989)

TargetMol

SKL2001

Chemical Properties



CAS No. : 909089-13-0

Formula: C14H14N4O3

Molecular Weight: 286.29

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	SKL2001, an agonist of the Wnt/β-catenin pathway, can disrupt the Axin/β-catenin interaction.
Targets(IC50)	Wnt/beta-catenin
In vitro	SKL2001 upregulated β-catenin responsive transcription by increasing the intracellular β-catenin protein level and inhibited the phosphorylation of β-catenin at residues Ser33/37/Thr41 and Ser45, which would mark it for proteasomal degradation, without affecting CK1 and GSK-3β enzyme activities. SKL2001 disrupted the Axin/β-catenin interaction, which is a critical step for CK1- and GSK-3β-mediated phosphorylation of β-catenin at Ser33/37/Thr41 and Ser45. The treatment of mesenchymal stem cells with SKL2001 promoted osteoblastogenesis and suppressed adipocyte differentiation, both of which were accompanied by the activation of Wnt/β-catenin pathway. SKL2001 did not affect either NF-κB or p53 reporter activity and inhibits β-catenin phosphorylation without affecting GSK-3β activity[1].
Cell Research	The HEK293 reporter and control cell lines were established. The HEK293 reporter cells were inoculated into 384-well plates at 10 000 cells per well and grown for 24 h. Next, each compound in the chemical library (~ 270 000) was added to at a final concentration of 20 μM. After 15 h, the plates were assayed for firefly luciferase activity. (Only for Reference)

Solubility Information

Solubility	DMSO: 242.5 mg/mL (847.04 mM),Sonication is recommended. Ethanol: 53 mg/mL (185.13 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (34.93 mM),Solution. 10% DMSO+90% Saline: < 10 mg/mL (34.93 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.493 mL	17.4648 mL	34.9296 mL
5 mM	0.6986 mL	3.493 mL	6.9859 mL
10 mM	0.3493 mL	1.7465 mL	3.493 mL
50 mM	0.0699 mL	0.3493 mL	0.6986 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Gwak J, et al. Cell Res. 2012, 22(1):237-47.
Liu X, Xie P, Hao N, et al. HIF-1-regulated expression of calreticulin promotes breast tumorigenesis and progression through Wnt/β-catenin pathway activation. Proceedings of the National Academy of Sciences. 2021, 118(44)
Cheng X, Qin L, Deng L, et al. SNX-2112 Induces Apoptosis and Inhibits Proliferation, Invasion, and Migration of Non-Small Cell Lung Cancer by Downregulating Epithelial-Mesenchymal Transition via the Wnt/β-Catenin Signaling Pathway. Journal of Cancer. 2021, 12(19): 5825-5837.
Lu F, Sun X, Xu X, et al. SILAC-based proteomic profiling of the suppression of TGF-β1-induced lung fibroblast-to-myofibroblast differentiation by trehalose[J]. Toxicology and Applied Pharmacology. 2020, 391: 114916.
Lu F, Sun X, Xu X, et al. SILAC-based proteomic profiling of the suppression of TGF-β1-induced lung fibroblast-to-myofibroblast differentiation by trehalose[J]. Toxicology and Applied Pharmacology. 2020: 114916.
Lu F, Sun X, Xu X, et al. SILAC-based proteomic profiling of the suppression of TGF-β1-induced lung fibroblast-to-myofibroblast differentiation by trehalose. Toxicology and Applied Pharmacology. 2020: 114916
Yan Z, Ruan B, Wang S, et al.RNA-binding Protein QKI Inhibits Osteogenic Differentiation Via Suppressing Wnt Pathway.Archives of Medical Research.2023: 102853.
Bi G, Liang J, Bian Y, et al.Polyamine-mediated ferroptosis amplification acts as a targetable vulnerability in cancer.Nature Communications.2024, 15(1): 2461.