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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Menin-MLL inhibitor MI-2

Cat. No.: HY-15222

CAS No.: 1271738-62-5

Molecular Formula: $C_{18}H_{25}N_5S_2$

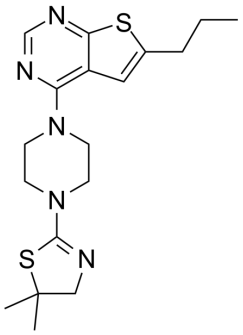
Molecular Weight: 375.55

Target: Epigenetic Reader Domain; Apoptosis

Pathway: Epigenetics; 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 : 50 mg/mL (133.14 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6628 mL	13.3138 mL	26.6276 mL
	5 mM	0.5326 mL	2.6628 mL	5.3255 mL
	10 mM	0.2663 mL	1.3314 mL	2.6628 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Menin-MLL inhibitor MI-2 is a Menin-MLL interaction inhibitor with IC_{50} of 446±28 nM.

IC_{50} & Target

IC50: 446±28 nM (Menin-MLL)[1]

In Vitro

Menin-MLL inhibitor MI-2 very effectively blocks proliferation of MLL-AF9 and MLL-ENL transduced BMC, with GI_{50} values of about 5 μM. Assessment of diverse hydrophobic groups at R1 led to the development of several compounds with IC_{50} values in the nanomolar range, including MI-2 (IC_{50}= 446±28 nM) and MI-3 (IC_{50}=648±25 nM).The dissociation constants measured

for the menin-MLL inhibitors are at the nanomolar level, K_d=158 nM for MI-2. MI-2 can access the protein target and very effectively inhibit the menin-MLL-AF9 interaction in human cells. Furthermore, MI-2 shows only a small effect on the cell growth of E2A-HLF transduced BMC (GI_{50}>50 μM), which may be due to inhibition of the menin interaction with wild-type MLL. Treatment with MI-2 results in GI_{50} values below 10 μM in MV4;11 (harboring MLL-AF4; GI_{50}=9.5 μM), KOPN-8 (MLL-ENL; GI_{50}=7.2 μM) and ML-2 (MLL-AF6; GI_{50}=8.7 μM), and in MonoMac6 (MLL-AF9; GI_{50}=18 μM)[1].

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

PROTOCOL

Cell Assay [1]

5×10^5 HEK 293 cells/mL are plated in 12-well plates (1 mL/well) and treated with compounds (e.g., MI-2) (0.25% final concentration of DMSO for each condition) or 0.25% DMSO control and incubated for 48h at 37°C in a 5% CO_2 incubator. After incubation, 1.5×10^5 cells are harvested and resuspended in 100 μL 1× Annexin V binding buffer from the Annexin V-FITC Apoptosis kit, incubated with 4 μL of AnnexinV-FITC and 6 μL of Propidium iodide at room temperature in the dark for 10 minutes and analyzed by flow cytometry on a LSR II instrument. Data analysis is performed using WinList software. The experiments are performed three times in triplicates with calculation of mean and standard deviation for each condition[1].

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

CUSTOMER VALIDATION

- Cell Syst. 2018 Apr 25;6(4):424-443.e7.
- Patent. US20180263995A1.

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REFERENCES

[1]. Grembecka J, et al. Menin-MLL inhibitors reverse oncogenic activity of MLL fusion proteins in leukemia. Nature Chemical Biology (2012), 8(3), 277-284.

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