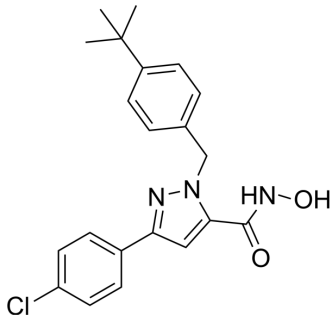
Nrf2-IN-1

Cat. No.:	HY-101025
CAS No.:	1610022-76-8
Molecular Formula:	$C_{21}H_{22}ClN_3O_2$
Molecular Weight:	383.87
Target:	Keap1-Nrf2
Pathway:	NF-κB
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 : 260 mg/mL (677.31 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6050 mL	13.0252 mL	26.0505 mL
	5 mM	0.5210 mL	2.6050 mL	5.2101 mL
	10 mM	0.2605 mL	1.3025 mL	2.6050 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: ≥ 2.17 mg/mL (5.65 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.17 mg/mL (5.65 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (5.65 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Nrf2-IN-1 is an inhibitor of nuclear factor-erythroid 2-related factor 2 (Nrf2). Nrf2-IN-1 is developed for the research of acute myeloid leukemia (AML)[1].

IC_{50} & Target

Nrf2[1]

In Vitro

Nrf2-IN-1 (Compound 4f) (10 μM) inhibits Nrf2 activation[1].
Nrf2-IN-1(1-20 μM; 48 hours) inhibits growth of the three AML cell[1].

Nrf2-IN-1 (5-10 μM; 48 hours) induces apoptosis of three AML cells in vitro[1].
Nrf2-IN-1 induces apoptotic signaling involving Bcl-2 and Bax[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	THP-1 cells, HL-60 cells, U937 cells
Concentration:	1 μM, 5 μM, 10 μM, 20 μM
Incubation Time:	48 hours
Result:	Inhibited growth of the three AML cell types at 5 μM, 10 μM or 20 μM for 48 hours.

Apoptosis Analysis[1]

Cell Line:	THP-1 cells, HL-60 cells, U937 cells
Concentration:	5 μM, 10 μM
Incubation Time:	48 hours
Result:	Induced apoptosis in AML cells in vitro.

Western Blot Analysis[1]

Cell Line:	THP-1 cells, HL-60 cells, U937 cells
Concentration:	5 μM, 10 μM
Incubation Time:	48 hours
Result:	Triggered caspase-dependent apoptotic signaling in AML cells.

In Vivo

Nrf2-IN-1 inhibits tumor growth via apoptosis in chicken eggs[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cancer Immunol Immunother. 2023 Mar 4.
- Cells Tissues Organs. July 08, 2021.

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REFERENCES

[1]. Zhang J, et al. Discovery of a novel Nrf2 inhibitor that induces apoptosis of human acute myeloid leukemia cells. Oncotarget. 2017 Jan 31;8(5):7625-7636.

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