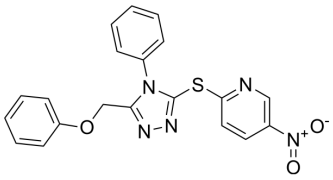
MIND4-17

Cat. No.:	HY-121523
CAS No.:	345989-24-4
Molecular Formula:	$C_{20}H_{15}N_5O_3S$
Molecular Weight:	405.43
Target:	Keap1-Nrf2
Pathway:	NF-κB

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (246.65 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4665 mL	12.3326 mL	24.6652 mL
	5 mM	0.4933 mL	2.4665 mL	4.9330 mL
	10 mM	0.2467 mL	1.2333 mL	2.4665 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 (6.17 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (6.17 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MIND4-17 is a potent NRF2 activator that covalently modifies a C151 residue of Keap1. MIND4-17 disrupts Keap1-Nrf2 association, leading to Nrf2 protein stabilization and nuclear translocation. MIND4-17 exerts potent antioxidant activity[1][2].

In Vitro

MIND4-17 (0.1-2 μM; 24 hr) significantly and concentration-dependently increases the expression of the canonical ARE genes Nqo1, Hmox1, Srx1, and to a lesser degree Gclc[1].

MIND4-17 (0.1-2 μM; 24 hr) shows a concentration-dependent induction of NQO1 and GCLM proteins in both WT and HD mutant ST14A cells[1].

MIN4-17 (0.1-10 μM) reduces ROS levels and nitrogen intermediates production in microglia[1].

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

RT-PCR[1]	
Cell Line:	Rat corticostriatal neuronal
Concentration:	1 μM, 5 μM
Incubation Time:	4 hours, 16 hours
Result:	Significantly and concentration-dependently increased the expression of the canonical ARE genes Nqo1, Hmox1, Srx1, and to a lesser degree Gclc.
Western Blot Analysis[1]	
Cell Line:	Wild-type (WT) and Huntington's disease (HD) mutant ST14A cells
Concentration:	0.1 μM, 0.2 μM, 0.5 μM, 0.7 μM, 1 μM, 1.5 μM, 2 μM
Incubation Time:	24 hours
Result:	Showed a concentration-dependent induction of NQO1 and GCLM proteins.

In Vivo

MIND4Ø17 (2 mg/kg; intravitreal injection; once) activates Nrf2 signaling and attenuates retinal dysfunction by light damage in mice[2].

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

Animal Model:	BALB/c mice bearing white fluorescent light exposure[2]
Dosage:	2 mg/kg
Administration:	Intravitreal injection; once
Result:	Activated Nrf2 signaling and attenuated retinal dysfunction by light damage in mice.

REFERENCES

[1]. Luisa Quinti, et al. SIRT2- and NRF2-Targeting Thiazole-Containing Compound with Therapeutic Activity in Huntington's Disease Models. Cell Chem Biol. 2016 Jul 21;23(7):849-861.

[2]. Nan Chen, et al. The Nrf2 activator MIND4-17 protects retinal ganglion cells from high glucose-induced oxidative injury. J Cell Physiol. 2020 Oct;235(10):7204-7213.

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