Nrf2/HO-1 activator 1

Cat. No.: HY-151430

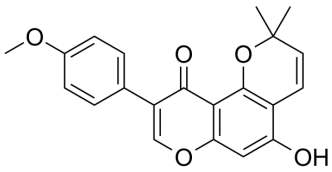
Molecular Formula: $C_{21}H_{18}O_5$

Molecular Weight: 350.36

Target: Keap1-Nrf2; ERK; Akt; JNK; Reactive Oxygen Species

Pathway: NF-κB; MAPK/ERK Pathway; Stem Cell/Wnt; PI3K/Akt/mTOR; Immunology/Inflammation; Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Nrf2/HO-1 activator 1 (Compound 24) is a potent Nrf2/HO-1 activator, neuroprotective agent. Nrf2/HO-1 activator 1 shows neuroprotective and antioxidant activities. Nrf2/HO-1 activator 1 can be used in Parkinson's disease (PD) research[1].

In Vitro

Nrf2/HO-1 activator 1 (0.3-30 μM; 24 h) exhibits potent neuroprotection in both 6-OHDA- and rotenone-induced cell death models[1].

Nrf2/HO-1 activator 1 (1-30 μM; 6 h) increases HO-1 expression in PC12 cells[1].

Nrf2/HO-1 activator 1 (12 μM; 1-12 h) increases phosphorylation of ERK1/2, JNK, and Akt in PC12 cells[1].

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

Cell Viability Assay[1]

Cell Line:	PC12 cells
Concentration:	0.3, 1, 3, 10, and 30 μM
Incubation Time:	4 hours
Result:	Inhibited 6-OHDA-induced toxicity with IC_{50} of 3.9 μM. Inhibited rotenone-induced toxicity with IC_{50} of 4.8 μM.

Western Blot Analysis[1]

Cell Line:	PC12 cells
Concentration:	10 μM
Incubation Time:	1, 3, 6, and 12 hours
Result:	Induced phosphorylation of ERK1/2, JNK, and Akt.

Western Blot Analysis[1]

Cell Line:	PC12 cells
Concentration:	1, 3, 10, and 30 μM
Incubation Time:	6 hours

	Result:	Increased HO-1 expression in a dose-dependent manner, with 2-fold increases at 30 μM concentrations.
In Vivo	Nrf2/HO-1 activator 1 inhibits the production of lipid peroxide in rat brain homogenates by 50.5% at 100 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Qili Lu, et al. Novel cudraisoflavone J derivatives as potent neuroprotective agents for the treatment of Parkinson's disease via the activation of Nrf2/HO-1 signaling. Eur J Med Chem. 2022 Nov 15;242:114692.

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