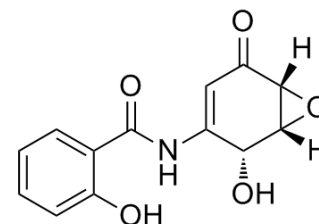


(+)-DHMEQ

Cat. No.:	HY-14645A		
CAS No.:	287194-41-6		
Molecular Formula:	C ₁₃ H ₁₁ NO ₅		
Molecular Weight:	261.23		
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 : ≥ 35 mg/mL (133.98 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
	Concentration				
	1 mM		3.8280 mL	19.1402 mL	38.2804 mL
	5 mM		0.7656 mL	3.8280 mL	7.6561 mL
	10 mM		0.3828 mL	1.9140 mL	3.8280 mL

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

BIOLOGICAL ACTIVITY

Description

(+)-DHMEQ is an activator of antioxidant transcription factor Nrf2. (+)-DHMEQ is the enantiomer of (-)-DHMEQ. (-)-DHMEQ inhibits NF-κB than its enantiomer (+)-DHMEQ.

IC₅₀ & Target

Nrf2^[1]

In Vitro

(+)-DHMEQ ((2R,3R,4R)-DHMEQ) activates Nrf2, which is a transcription factor that induces the expression of multiple antioxidant enzymes. (+)-DHMEQ activates Nrf2 in a promoter reporter assay. (+)-DHMEQ also increases the expression of target antioxidant proteins and cancelled reactive oxygen species (ROS)-induced cell death in a neuronal cell line. ROS generating 6-hydroxydopamine hydrochloride (6-OHDA) induces the death of SK-N-SH cells, and (+)-DHMEQ decreases the cytotoxic effect of 6-OHDA, whereas its effect is weaker in Nrf2-knockdown cells prepared with siRNA. Thus, enhancement of the neural cell viability by (+)-DHMEQ is due to the activation of Nrf2^[1].

PROTOCOL

Cell Assay ^[1]

SK-N-SH cells are seeded at 1.75×10^4 cells/well in a 24-well plate and cultured overnight. The cells are treated with various concentrations of (+)-DHMEQ (1, 3, and 10 $\mu\text{g/mL}$) for 24 h and subsequently treated with 300 μM 6-OHDA for 24 h. Then, cells are stained with Trypan blue, and the number of stained cells is counted^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Sens Actuators B Chem. 2018 Nov 20;274:481-490.
- J Neuroimmune Pharmacol. 2018 Jul 10.

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REFERENCES

[1]. Niitsu Y, et al. Chemoenzymatic synthesis of (2R,3R,4R)-dehydroxymethylepoxyquinomicin (DHMEQ), a new activator of antioxidant transcription factor Nrf2. Org Biomol Chem. 2011 Jun 21;9(12):4635-41.

Caution: Product has not been fully validated for medical applications. For research use only.

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