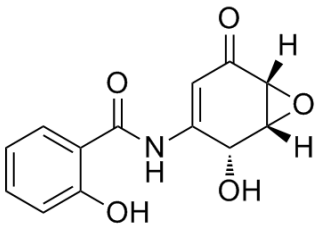
Data Sheet

Product Name:	(+)-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
Solubility:	DMSO: ≥ 35 mg/mL



BIOLOGICAL ACTIVITY:

(+)-DHMEQ is an activator of antioxidant transcription factor **Nrf2**. (+)-DHMEQ is the enantiomer of (-)-DHMEQ. (-)-DHMEQ inhibits NF-kB 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 (Extracted from published papers and Only for reference)

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 μg/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].

References:

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

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