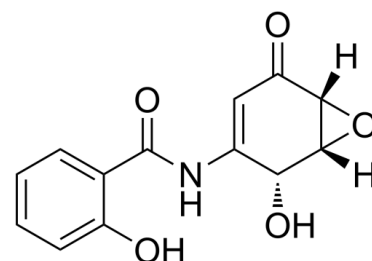


Data Sheet

Product Name:	(+)-DHMEQ
Cat. No.:	CS-5817
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 : 100 mg/mL (ultrasonic)



BIOLOGICAL ACTIVITY:

(+)-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 (Extracted from published papers and Only for reference)

Cell Assay: ^[1]SK-N-SH cells are seeded at 1.75×10⁴ 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 new activator of antioxidant transcription factor Nrf2. *Org Biomol Chem*. 2011 Jun 21;9(12):4635-41.

CAIndexNames:

Benzamide, 2-hydroxy-N-[(1R,2R,6R)-2-hydroxy-5-oxo-7-oxabicyclo[4.1.0]hept-3-en-3-yl]-

SMILES:

O=C(NC([C@@H](O)[C@@]1([H])O[C@@]21[H])=CC2=O)C3=CC=CC=C3O

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

Tel: 610-426-3128

Fax: 888-484-5008

E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite F, Monmouth Junction, NJ 08852, USA