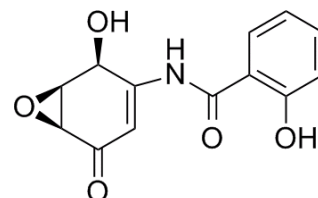


Data Sheet

Product Name:	(-)-DHMEQ
Cat. No.:	HY-14645
CAS No.:	287194-40-5
Molecular Formula:	C ₁₃ H ₁₁ NO ₅
Molecular Weight:	261.23
Target:	NF-κB
Pathway:	NF-κB
Solubility:	DMSO: ≥ 32 mg/mL



BIOLOGICAL ACTIVITY:

(-)-DHMEQ, the eutomer of DHMEQ, is a newly developed NF-κB inhibitor, inhibits nuclear factor κB activation with IC₅₀ value of 20 μg/mL, the activity is stronger than (+)-DHMEQ (HY-14645A).

target: NF-κB [1]

IC 50: 20 μg/mL [2]

In vitro: (-)-DHMEQ significantly reduces eosinophilic airway inflammation and levels of Th2 cytokines in bronchoalveolar lavage fluid in the acute model. It also inhibits parameters of airway remodelling including mucus production, peribronchial fibrosis and the expression of α-smooth muscle actin.[1] (-)-DHMEQ strongly inhibits cyclin D1 and vascular endothelial growth factor (VEGF) promoter activity and decreased the levels of cyclin D1 protein and VEGF mRNA in KB cells; (-)-DHMEQ strongly inhibits cyclin D1 and vascular endothelial growth factor (VEGF) promoter activity and decreased the levels of cyclin D1 protein and VEGF mRNA in KB cells.[2] (-)-DHMEQ suppresses the tumour growth and anti-inflammatory effects.[3] (-)-DHMEQ inhibits TPA-induced activation of NF-κB and differentiation of THP-1 cells into macrophages.[5]

In vivo: When (-)-DHMEQ is injected into mice 2 h before LPS injection, the survival of the LPS-injected mice was prolonged. When (-)-DHMEQ is injected twice (2 h before LPS injection and the day after LPS injection), all the mice are rescued. (-)-DHMEQ can be utilized for the prevention and treatment of endotoxin shock.[3]

References:

- [1]. Matsumoto N et al. Synthesis of NF-κB activation inhibitors derived from epoxyquinomicin C. *Bioorg Med Chem Lett*. 2000 May 1;10(9):865-9.
- [2]. Yoshikazu Suzuki et al. Preparation and biological activities of optically active dehydroxymethylepoxyquinomicin, a novel NF-κB inhibitor. *Tetrahedron*. *Tetrahedron* 60 (2004) 7061-7066
- [3]. Shimizu K et al. Dehydroxymethylepoxyquinomicin (DHMEQ), a novel NF-κB inhibitor, inhibits allergic inflammation and airway remodelling in murine models of asthma. *Clin Exp Allergy*. 2012 Aug;42(8):1273-81.
- [4]. Ruan HY et al. Effects of a novel NF-κB inhibitor, dehydroxymethylepoxyquinomicin (DHMEQ), on growth, apoptosis, gene expression, and chemosensitivity in head and neck squamous cell carcinoma cell lines. *Head Neck*. 2006 Feb;28(2):158-65.
- [5]. Shimo T et al. Dehydroxymethylepoxyquinomicin (DHMEQ) can suppress tumour necrosis factor-α production in lipopolysaccharide-injected mice, resulting in rescuing mice from death in vivo. *Clin Exp Immunol*. 2011 Nov;166(2):299-306.

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

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