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Bimoclomol

Catalog No: tcsc7475

Available Sizes

Size: 1mg

Size: 5mg

Size: 10mg

Specifications

CAS No:
130493-03-7

Formula:
$C_{14}H_{20}ClN_3O_2$

Pathway:
Metabolic Enzyme/Protease;Cell Cycle/DNA Damage

Target:
HSP;HSP

Purity / Grade:
>98%

Solubility:
10 mM in DMSO

Observed Molecular Weight:
297.78

Product Description

Bimoclomol is a **heat shock protein (HSP)** coinducer, used for treatment of cardiovascular diseases.

In Vitro: Bimoclomol (40 μM) significantly increases coronary flow (CF) in the period of normoxic perfusion (before ischemia).

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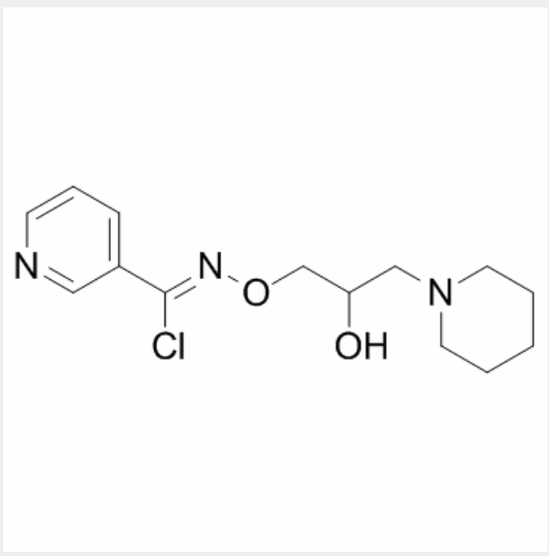
Bimoclomol significantly increases LVDP and CO, but it decreases LVEDP under ischemic conditions. Bimoclomol displays a biphasic effect on the rate of relaxation. Bimoclomol (>10 μM) causes concentration-dependent vasorelaxation, with EC_{50} value of 214 μM. Bimoclomol (100 μM) induces vasorelaxation also against 20 mM KCl. However, bimoclomol fails to relax preparations precontracted with serotonin, PGF2 or angiotensin II[1]. Bimoclomol does not affect the stability of Hsp70 or its mRNA. Bimoclomol coinduces Hsp expression via the prolonged activation of the heat shock transcription factor (HSF-1). The effects of bimoclomol are abolished in cells from mice lacking HSF-1. Furthermore, bimoclomol can bind to HSF-1 and induce a prolonged binding of HSF-1 to the respective DNA elements[2]. Bimoclomol (0.1, 1 and 10 μM) improves cell survival of rat neonatal cardiomyocytes compared to vehicle-treated cells. Bimoclomol (0.01 to 10 μM) significantly elevates HSP70 levels, based on the time of exposure. Pretreatment with bimoclomol for 24 h significantly increases survival of cells[3].

In Vivo: Bimoclomol (1 and 5 mg/kg) decreases the ST-segment elevation induced by coronary occlusion by 56% and 80%, respectively, in anesthetized dogs[1].



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