

Product Datasheet

Cipepofol

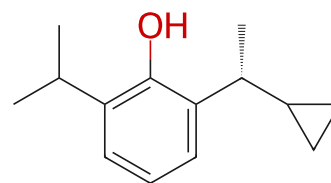
Catalog No. **BP-01915** · CAS **1637741-58-2** · Form **free base** · Physical state **liquid** · Color **Colorless to light yellow** · Version **1.0** · Revision **2026-09-04**

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Target GABA Receptor; Sirtuin; Keap1-Nrf2; Apoptosis	Research area Cardiovascular Disease; Neurological Disease; Metabolic Disease; Inflammation/Immunology; Cancer
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Molecular formula	C₁₄H₂₀O
Molecular weight	204.3080

STRUCTURE



DESCRIPTION

Cipepofol (Ciprofol), a novel 2,6-disubstituted phenol derivative, is a positive allosteric modulator and direct agonist of the GABAA receptor. Cipepofol can cause the central nerve inhibition and promote sleep based on the structural modification of Propofol. Cipepofol can activate the sirtuin1 (Sirt1)/Nrf2 pathway. Cipepofol protects the heart against Isoproterenol-induced myocardial infarction by reducing cardiac oxidative stress, inflammatory response and cardiomyocyte apoptosis

BIOLOGICAL ACTIVITY

In Vitro

Cipepofol (Ciprofol) can trigger chloride influx by competitive binding to butylbicyclophosphorothionate and t-butylbicycloorthobenzoate targets in the chloride channels of GABAA receptors. The influx of chloride can cause hyperpolarization of nerve cell membranes by increasing the intracellular chloride concentration and further activating GABAergic neurons to achieve central nerve inhibition.

Cipepofol (5 μM before ISO insult for 6 h) blunts the contents of CK-MB, LDH and cTnT were increased in ISO-treated H9c2 cells. Cipepofol attenuates ISO-induced cardiomyocyte apoptosis in vitro.

In Vivo

Cipepofol (Ciprofol; 100 μL; implanted into the abdomen of mice 1 h before ISO) suppresses ISO-induced myocardial damage, cardiac dysfunction, and inflammation and cardiomyocyte apoptosis.

SOLUBILITY

Soluble in DMSO : 100 mg/mL

REFERENCES

[1]. Ming Lu, et al. Ciprofol: A Novel Alternative to Propofol in Clinical Intravenous Anesthesia? Biomed Res Int. 2023 Jan 19;2023:7443226.

[2]. Yunzhao Yang, et al. Ciprofol attenuates the isoproterenol-induced oxidative damage, inflammatory response and cardiomyocyte apoptosis. Front Pharmacol. 2022 Nov 22;13:1037151.

Tel: +86 20 31130026 · Fax: +86 20 36822386 · tech@biochemprobe.com · www.biochemprobe.com

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