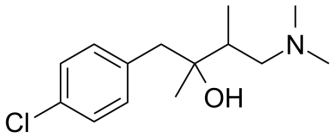
Clobutinol

Cat. No.:	HY-148144
CAS No.:	14860-49-2
Molecular Formula:	$C_{14}H_{22}ClNO$
Molecular Weight:	255.78
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Clobutinol is a compound that has anti-tussive effects. Clobutinol affects heart rate and blood pressure, it can be used for cough related research[1][2][3].

In Vitro

Clobutinol (10 μM) significantly inhibits the voltage-gated outward current in hERG-expressing cells[1].
Clobutinol (0-1000 μM) inhibits the outward current in hERG transfected cells with an IC_{50} value of 1.9 μM[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Clobutinol (1-20 mg/kg; i.v. once) has no obvious effect on the airway of guinea-pigs[2].
Clobutinol (1 and 10 mg/kg; i.v. once) affects heart rate and mean blood pressure of guinea pigs[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Anaesthetized guinea-pigs[2]
Dosage:	1-20 mg/kg
Administration:	Intravenous injection; 1-20 mg/kg once
Result:	Showed no obvious effect on the airways, but affected the cardiovascular system considerably with a high dose.

Animal Model:	Anesthetized closed-chest guinea pigs[3]
Dosage:	1 and 10 mg/kg
Administration:	Intravenous injection; 1 and 10 mg/kg once
Result:	Decreased the heart rate with a dose of 1 mg/kg, and decreased the heart rate and mean blood pressure with a dose of 10 mg/kg.

REFERENCES

[1]. Deisemann H, et al. Effects of common antitussive drugs on the hERG potassium channel current. J Cardiovasc Pharmacol. 2008 Dec;52(6):494-9.

[2]. Salonen RO. Comparison of the effects of two opioid antitussives, vadocaine hydrochloride, clobutinol and lidocaine on lung mechanics in guinea-pigs. Arzneimittelforschung. 1988 Apr;38(4A):609-12.

[3]. Takahara A, Set al. Clobutinol delays ventricular repolarization in the guinea pig heart: comparison with cardiac effects of HERG K+ channel inhibitor E-4031. J Cardiovasc Pharmacol. 2009 Dec;54(6):552-9.

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