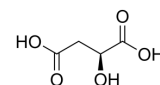
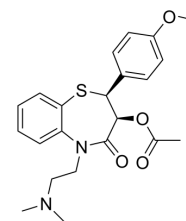


Diltiazem malate

Cat. No.:	HY-B0632A
CAS No.:	144604-00-2
Molecular Formula:	C ₂₆ H ₃₂ N ₂ O ₉ S
Molecular Weight:	548.61
Target:	Calcium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Diltiazem malate is a potent and orally active L-type calcium channel inhibitor. Diltiazem malate shows antihypertensive and antiarrhythmic effects. Diltiazem malate can be used for the research of cardiac arrhythmia, hypertension, and angina pectoris ^{[1][2][3]} .
IC₅₀ & Target	L-type calcium channel
In Vitro	Diltiazem malate (200 μM) elicits a use-dependent blockade that proceeded within a relatively small number of pulses ^[1] . Diltiazem malate reduces Ca ²⁺ influx by accelerating inactivation during action potentials, and that the use-dependent blockade is due to increases in the number of channels in a sustained closed state ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Diltiazem malate (100 mg/kg; p.o.; daily for 4 weeks) prevents aortic aneurysm formation in a blood pressure-independent manner ^[3] . Diltiazem malate (100 mg/kg; p.o.; daily for 6 days) with ATII (1.44 mg/kg; p.o.; daily for 6 days) reduces the ATII-induced vascular inflammation and macrophage accumulation in ApoE ^{-/-} mice ^[3] . Diltiazem malate (2 mg/kg; i.v.) exhibits T _{1/2} of 61.2 min, CL _{el} of 3.2 mL/min in rats ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Cardiovasc Transl Res. 2023 Jan 30.
- Pharmacol Res Perspect. 2021 Oct;9(5):e00879.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Niimi Y, et al. Diltiazem facilitates inactivation of single L-type calcium channels in guinea pig ventricular myocytes. Jpn Heart J. 2003 Nov;44(6):1005-14.
- [2]. S Lin Tang, et I. Structural Basis for Diltiazem Block of a Voltage-Gated Ca²⁺ Channel. Mol Pharmacol. 2019 Oct; 96(4): 485-492.

[3]. Mieth A, et al. L-type calcium channel inhibitor diltiazem prevents aneurysm formation by blood pressure-independent anti-inflammatory effects. Hypertension. 2013 Dec;62(6):1098-104.

[4]. S. J. Downing, et al. Diltiazem pharmacokinetics in the rat and relationship between its serum concentration and uterine and cardiovascular effects. Br J Pharmacol. 1987 Aug; 91(4): 735-745.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

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