Catharanthine Sulfate

Cat. No.: HY-N0252B

CAS No.: 153230-94-5

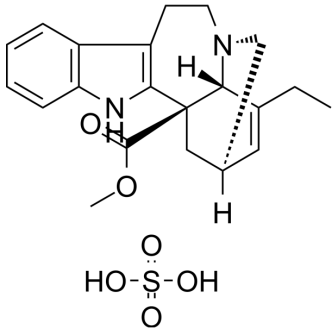
Molecular Formula: $C_{21}H_{26}N_2O_6S$

Molecular Weight: 434.51

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	Catharanthine ((+)-3,4-Didehydrocoronaridine) Sulfate, a constituent of anticancer vinca alkaloids, inhibits voltage-operated L-type Ca^{2+} channel (VOCC). Catharanthine Sulfate has IC_{50}s of 220 μM and 8 μM for VOCC currents in cardiomyocytes and vascular smooth muscle cells (VSMCs), respectively. Catharanthine Sulfate lowers blood pressure (BP), heart rate (HR). Catharanthine Sulfate has anti-cancer activity[1][2].
IC_{50} & Target	L-type calcium channel
In Vivo	Catharanthine ((+)-3,4-Didehydrocoronaridine; 0.5-20 mg/kg; IV; single dose) Sulfate evokes dose-dependent reductions in both BP and HR[1]. Catharanthine (40 mg/kg; ip; single dose) Sulfate with acute administration induces similar antidepressant-like activity in male and female mice at 1 h and 24 h[1]. Catharanthine (20 mg/kg; ip; for 14 consecutive days) Sulfate increases swimming time and decreases immobility time at D7 or D14 in mice[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	13-week-old male Sprague Dawley rats (300-350 g)[1]
Dosage:	0.5-20 mg/kg
Administration:	IV; single dose
Result:	Evoked rapid, transient reductions in BP and HR (lasting ,2 minutes) at low doses (0.5–5 mg/kg), whereas at higher doses (10 and 20 mg/kg), the BP and HR reductions were sustained.

REFERENCES

[1]. Hugo R Arias, et al. (+)-Catharanthine and (-)-18-methoxycoronaridine induce antidepressant-like activity in mice by differently recruiting serotonergic and norepinephrinergic neurotransmission. Eur J Pharmacol. 2023 Jan 15:939:175454.

[2]. Jadhav A, et al. Catharanthine dilates small mesenteric arteries and decreases heart rate and cardiac contractility by inhibition of voltage-operated calcium channels

on vascular smooth muscle cells and cardiomyocytes. J Pharmacol Exp Ther. 2013 Jun;345(3):383-92.

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