Oxyfedrine

Cat. No.: HY-112070

CAS No.: 15687-41-9

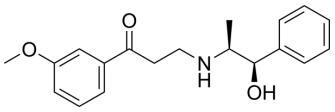
Molecular Formula: $C_{19}H_{23}NO_3$

Molecular Weight: 313.39

Target: Adrenergic Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Oxyfedrine, a vasodilator, is an orally active β-adrenoreceptor agonist. Oxyfedrine decreases the tonicity of coronary vessels. Oxyfedrine can be used in the research of cardiovascular disease[1][2].
IC_{50} & Target	β-adrenoceptor
In Vitro	Oxyfedrine (50 μM, 48 h) suppresses aldehyde dehydrogenase (ALDH) activity in HCT116 and HSC-4 cells[1]. Oxyfedrine (50 μM, 48 h) acts as a sensitizer for GSH-depleting agents, and induces cell death in HCT116 and HSC-4 cells when with the drug combinations[1]. Oxyfedrine (0-1 μg/mL) inhibits spontaneous myogenic activity in rat isolated portal vein[4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Oxyfedrine (14 mg/kg, p.o., for 3-4 weeks) shows anti-anginal action in cats[2]. Oxyfedrine (10 mg/kg, i.p., HCT116 cell xenograft mice) suppresses tumor growth when combined with sulfasalazine (SSZ, 350 mg/kg, i.p.)[1]. Oxyfedrine (1 mg/kg, i.v.) decreases the arterial and venous blood high blood viscosity (HBV) in ice water stress rats[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Cats[2]
Dosage:	14 mg/kg
Administration:	Oral administration (p.o.), for 3-4 weeks.
Result:	Decreased systolic and diastolic blood pressures, increased heart rate and cardiac output.

REFERENCES

[1]. Otsuki Y, et al. Vasodilator oxyfedrine inhibits aldehyde metabolism and thereby sensitizes cancer cells to xCT-targeted therapy. Cancer Sci. 2020 Jan;111(1):127-136.

[2]. Parratt JR. The haemodynamic effects of prolonged oral administration of oxyfedrine, a partial agonist at beta-adrenoceptors: comparison with propranolol. Br J Pharmacol. 1974 May;51(1):5-13.

[3]. Yu J, et al. [Effects of oxyfedrine on high blood viscosity and myocardial necrosis induced by epinephrine and ice water stress in rats]. Zhongguo Yao Li Xue Bao. 1993

Jul;14(4):364-6.

[4]. Mackenzie JE, et al. Effects of oxyfedrine on isolated portal vein and other smooth muscles. Br J Pharmacol. 1973 Apr;47(4):827-37.

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