Acebutolol

Cat. No.: HY-17497

CAS No.: 37517-30-9

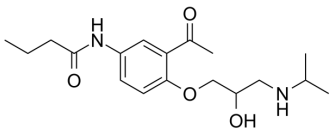
Molecular Formula: $C_{18}H_{28}N_2O_4$

Molecular Weight: 336.43

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	Acebutolol is an orally active β1 adrenergic receptor (β1AR) antagonist. Acebutolol is used for hypertension, angina pectoris and cardiac arrhythmias research[1][2][3].
IC_{50} & Target	β1 adrenoceptor
In Vivo	Acebutolol is a beta blocker for the treatment of hypertension and arrhythmias. Acebutolol following single intravenous administration (10 mg/kg) to rat results in the plasma clearance of 61.9 mL/min/kg, the volume of distribution of 9.6 L/kg, and an elimination half-life of 1.8 hours. Acebutolol following single intravenous administration (50 mg/kg) to rat results in the plasma clearance of 46.5 mL/min/kg, the volume of distribution of 9.5 L/kg, and an elimination half-life of 2.3 hours[1]. Acebutolol (30 mg/kg) decreases cardiac output by 65% and 31% after 1 min and 10 min measurements, respectively, in Sprague-Dawley rats. Acebutolol (30 mg/kg) significantly reduces regional blood flow (RBF) in most organs either after 1 min or 10 min measurements when compare with the baseline values in Sprague-Dawley rats[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Protein Cell. 2019 Mar;10(3):178-195.
- J Pharmaceut Biomed. 2020, 113870.
- Department of Analytical Chemistry. Charles University. 2019 Jun.

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REFERENCES

[1]. Piquette-Miller, M. and F. Jamali, Pharmacokinetics and multiple peaking of acebutolol enantiomers in rats. Biopharm Drug Dispos, 1997. 18(6): p. 543-56.

[2]. Bristow MR, et al. Treatment of chronic heart failure with β-adrenergic receptor antagonists: a convergence of receptor pharmacology and clinical cardiology. Circ Res. 2011 Oct 28;109(10):1176-94.

[3]. Mostafavi, S., R. Lewanczuk, and R. Foster, Influence of acebutolol and metoprolol on cardiac output and regional blood flow in rats. Biopharm Drug Dispos, 2000. 21(4): p. 121-8.

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