Ajmalicine hydrochloride

Cat. No.: HY-N1919A

CAS No.: 4373-34-6

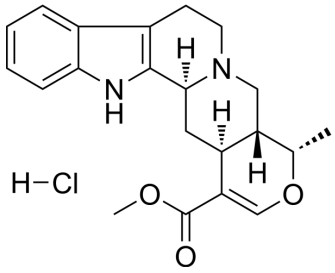
Molecular Formula: $C_{21}H_{25}ClN_2O_3$

Molecular Weight: 388.89

Target: Adrenergic Receptor; Cholinesterase (ChE)

Pathway: GPCR/G Protein; Neuronal Signaling

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



BIOLOGICAL ACTIVITY

Description	Ajmalicine (Raubasine) hydrochloride is a potent adrenolytic agent which preferentially blocks α_1-adrenoceptor. Ajmalicine hydrochloride is an reversible but non-competitive nicotine receptor full inhibitor, with an IC_{50} of 72.3 μM. Ajmalicine hydrochloride also can be used as anti-hypertensive, and serpentine, with sedative activity[1][2].	
IC_{50} & Target	α1-adrenergic receptor	α2-adrenergic receptor
In Vitro	Ajmalicine hydrochloride preferentially blocks α_1-adrenoceptor than α_2-adrenoceptor[1]. Ajmalicine hydrochloride inhibits contractions in a concentration-dependent manner (IC_{50}=72.3 ± 22.5 μM)[2]. Ajmalicine hydrochloride acts preferentially at postsynaptic sites, competitively antagonizes the effect of noradrenaline on postsynaptic alpha-adrenoceptor with a pA2 value of 6.57, blocks the inhibitory effect of clonidine with an pA2 value of 6.2[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Ajmalicine hydrochloride blocking the pressor action of electrical stimulation and is active against sympathetic stimulation [1]. Ajmalicine hydrochloride (0.5-4 mg/kg) induces a marked dose-dependent inhibition against the pressor response to noradrenaline[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

Animal Model:	Male Wistar rats (300-350 g)[1]
Dosage:	0.5, 1, 2, and 4 mg/kg
Administration:	IV, once
Result:	Induced a marked dose-dependent inhibition against the pressor response to noradrenaline.

REFERENCES

[1]. Roquebert J, et al. Inhibition of the alpha 1 and alpha 2-adrenoceptor-mediated pressor response in pithed rats by raubasine, tetrahydroalstonine and akuammigine. Eur J Pharmacol. 1984 Oct 30;106(1):203-5.

[2]. Pereira DM, et al. Pharmacological effects of Catharanthus roseus root alkaloids in acetylcholinesterase inhibition and cholinergic neurotransmission. Phytomedicine. 2010 Jul;17(8-9):646-52.

[3]. Demichel P, et al. Effects of raubasine stereoisomers on pre- and postsynaptic alpha-adrenoceptors in the rat vas deferens. Br J Pharmacol. 1984 Oct;83(2):505-10

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

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