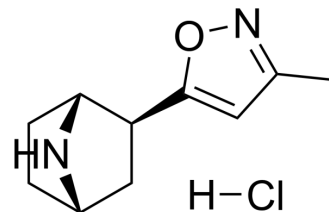


Epiboxidine hydrochloride

Cat. No.:	HY-138953A
CAS No.:	862909-67-9
Molecular Formula:	C ₁₀ H ₁₅ ClN ₂ O
Molecular Weight:	214.69
Target:	nAChR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	Epiboxidine hydrochloride is a potent and selective neural nAChR agonist with K _i s of 0.46 nM and 1.2 nM for rat and human α4β2 nAChRs, respectively. Epiboxidine hydrochloride is a methylisoxazole analog of the alkaloid Epibatidine, and is also an analog of another nAChR agonist, ABT 418 ^[1] .
In Vitro	Epiboxidine hydrochloride has affinity and functional at central neuronal α4β2 receptors, with K _i s of 0.46 and 1.2 in rat and human ^[1] . Epiboxidine hydrochloride has activity at ganglionic-type α3β4*-nicotinic receptors of PC12 cells, with a K _i of 19 ^[1] . Epiboxidine hydrochloride is much less toxic than Epibatidine ^[1] . Epiboxidine hydrochloride stimulates sodium-22 influx in PC12 and TE671 cells, with EC ₅₀ s of 0.18 and 2.6 μM ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Epiboxidine hydrochloride (20 μg/kg; ip; once) treatment shows marked analgetic activity in mice ^[1] . Epiboxidine hydrochloride (50 and 100 mg/kg; intraperitoneal injected; once) causes marked antinociception as measured in the hot-plate assay ^[2] . Epiboxidine hydrochloride inhibits [³ H]nicotine binding in rat cerebral cortical membranes, with a K _i of 0.6 nM ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Fitch RW, et al. Homoepiboxidines: further potent agonists for nicotinic receptors. *Bioorg Med Chem.* 2004;12(1):179-190.
- [2]. Badio B, et al. Synthesis and nicotinic activity of epiboxidine: an isoxazole analogue of epibatidine. *Eur J Pharmacol.* 1997;321(2):189-194.

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

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