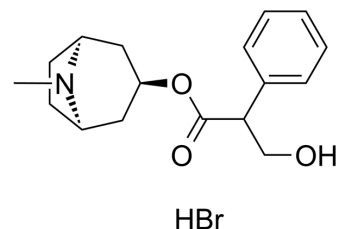


## Atropine hydrobromide

<b>Cat. No.:</b>	HY-B1205B
<b>CAS No.:</b>	6415-90-3
<b>Molecular Formula:</b>	C <sub>17</sub> H <sub>24</sub> BrNO <sub>3</sub>
<b>Molecular Weight:</b>	370.28
<b>Target:</b>	mAChR
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Atropine (Tropine tropate) hydrobromide is a competitive muscarinic acetylcholine receptor (mAChR) antagonist with IC <sub>50</sub> values of 0.39 and 0.71 nM for Human mAChR M <sub>4</sub> and Chicken mAChR M <sub>4</sub> , respectively. Atropine hydrobromide inhibits ACh-induced relaxations in human pulmonary veins. Atropine hydrobromide can be used for research of anti-myopia and bradycardia <sup>[1][2][3][4]</sup> .	
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 0.39 nM (Human mAChR M <sub>4</sub> ) and 0.71 nM (Chicken mAChR M <sub>4</sub> ) <sup>[3]</sup>	
<b>In Vitro</b>	Atropine (Tropine tropate; 1 μM; pulmonary veins and arteries) hydrobromide inhibits ACh-induced relaxations in human pulmonary veins <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
<b>In Vivo</b>	Atropine (Tropine tropate; 10 mg/kg; i.p.; once, for 40 minutes; Peromyscus sp.) hydrobromide inhibits the cardiac arrhythmia which normally occurs throughout torpor <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	<b>Animal Model:</b>	White-footed mice (Peromyscus sp.) <sup>[2]</sup>
	<b>Dosage:</b>	10 mg/kg
	<b>Administration:</b>	Intraperitoneal injection; once, for 40 minutes
	<b>Result:</b>	Increased heart rate was a decrease in cardiac arrhythmia.

### CUSTOMER VALIDATION

- Cell Rep. 2022 Mar 8;38(10):110468.
- Food Chem. 30 November 2022, 133593.
- Front Pharmacol. 2020 Jul 31;11:1038.
- Can J Physiol Pharmacol. 2020 Oct;98(10):725-732.

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- J Biosci. 2021;46:90.

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## REFERENCES

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- [1]. McBrien NA, et, al. How does atropine exert its anti-myopia effects? Ophthalmic Physiol Opt. 2013 May;33(3):373-8.
- [2]. Morhardt JE. Heart rates, breathing rates and the effects of atropine and acetylcholine on white-footed mice (*Peromyscus* sp.) during daily torpor. Comp Biochem Physiol. 1970 Mar 15;33(2):441-57.
- [3]. Carr BJ, et, al. Myopia-Inhibiting Concentrations of Muscarinic Receptor Antagonists Block Activation of Alpha2A-Adrenoceptors In Vitro. Invest Ophthalmol Vis Sci. 2018 Jun 1;59(7):2778-2791.
- [4]. Walch L, et, al. Evidence for a M(1) muscarinic receptor on the endothelium of human pulmonary veins. Br J Pharmacol. 2000 May;130(1):73-8.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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