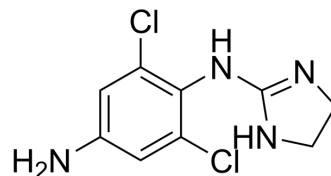


## Apraclonidine

Cat. No.:	HY-12720
CAS No.:	66711-21-5
Molecular Formula:	C <sub>9</sub> H <sub>10</sub> Cl <sub>2</sub> N <sub>4</sub>
Molecular Weight:	245.11
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

<b>Description</b>	Apraclonidine (ALO 2145 (free base)), a selective α2 and weak α1 receptor agonist activity, effectively low intraocular pressure (IOP) in human eyes. Apraclonidine hydrochloride is a topical ophthalmic solution <sup>[1][2]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	α adrenergic receptor
<b>In Vitro</b>	Apraclonidine (ALO 2145 (free base)) is more commonly used topically for glaucoma, as it penetrates the cornea and blood-brain barrier to a lesser extent and, thus, has fewer adverse systemic effects <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Apraclonidine (ALO 2145 (free base)) is effective in animal models of elevated IOP as well as glaucoma in humans. The ocular hypotensive effects of Apraclonidine are usually attributed to reduced aqueous humor synthesis and vasoconstrictor actions at the anterior segment branches of the ophthalmic artery. Apraclonidine (ALO 2145 (free base)) (1.15%, single instillation) inhibits 98% of PGE2-induced aqueous flare elevation <sup>[2][3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Model:	male rabbits <sup>[3]</sup>
Dosage:	1.15%
Administration:	Apraclonidine (1.15%, single instillation)
Result:	Inhibited PGE2-induced elevation of aqueous flare in pigmented rabbits.

### CUSTOMER VALIDATION

- Anal Chim Acta. 2023 Jul 31 341673.
- Anal Lett. 2022: 1-11.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

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## REFERENCES

- [1]. Subhashie Wijemanne, et al. Apraclonidine in the treatment of ptosis. J Neurol Sci
- [2]. R V Searles, et al. Aqueous humor dynamics in anesthetized rats infused with intracameral apraclonidine. Pharmacology. 1999 Apr;58(4):220-6.
- [3]. Yoriko Hayasaka, et al. Effects of topical antiglaucoma eye drops on prostaglandin E(2)-induced aqueous flare elevation in pigmented rabbits. Invest Ophthalmol Vis Sci
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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