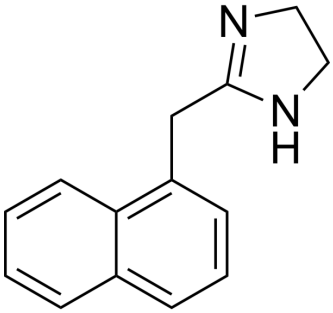
Naphazoline

Cat. No.:	HY-111326
CAS No.:	835-31-4
Molecular Formula:	$C_{14}H_{14}N_2$
Molecular Weight:	210.27
Target:	Adrenergic Receptor; TNF Receptor; Interleukin Related; VEGFR
Pathway:	GPCR/G Protein; Neuronal Signaling; Apoptosis; Immunology/Inflammation; Protein Tyrosine Kinase/RTK
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Naphazoline (Naphthazoline) is a potent α-adrenergic receptor agonist. Naphazoline reduces vascular hyperpermeability and promotes vasoconstriction. Naphazoline reduces the levels of inflammatory factors (TNF-α, IL-1β and IL-6), cytokines (IFN-γ and IL-4), IgE, GMCSF, and NGF。Naphazoline can be used for non-bacterial conjunctivitis research[1][2].		
IC_{50} & Target	IL-1β	IL-6	IL-4

In Vivo

Naphazoline (0.2 mg/kg, 10 μl per eye; IP, once) reduces histamine or antigen-induced conjunctival vascular hyperpermeability in mice, and reduces conjunctivitis in mice via effects on inflammation, NGF and VEGF[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female wild-type BALB/c mice (4-5 weeks, 18 ± 2 g, n=8/group, allergic conjunctivitis mouse model established using histamine or an antigen (ovalbumin))[1]
Dosage:	0.2 mg/mL, 10 μl per eye
Administration:	Intraperitoneal injection (IP), once
Result:	Significantly suppressed conjunctival dye leakage in mice with histamine or antigen induced conjunctival vascular hyperpermeability. Reduced inflammatory reactions and the levels of IL-1β, IL-6, IFN-γ, and IL-4. Reduced the levels of IgE, GMCSF, NGF and VEGF in antigen-induced conjunctival vascular hyperpermeability mice.

REFERENCES

[1]. Quan L, et, al. Treatment with olopatadine and naphazoline hydrochloride reduces allergic conjunctivitis in mice through alterations in inflammation, NGF and VEGF. Mol Med Rep. 2016 Apr;13(4):3319-25.

[2]. Yamaguchi I, et, al. Central and peripheral adrenergic mechanisms regulating gastric secretion in the rat. J Pharmacol Exp Ther. 1977 Oct;203(1):125-31.

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

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA