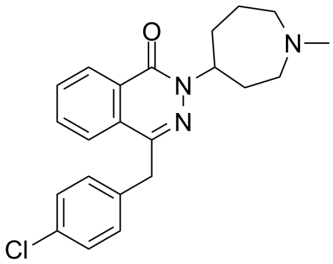
Azelastine

Cat. No.:	HY-B0462A
CAS No.:	58581-89-8
Molecular Formula:	$C_{22}H_{24}ClN_3O$
Molecular Weight:	381.9
Target:	Histamine Receptor; SARS-CoV
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Azelastine, an antihistamine, is a potent and selective histamine 1 (H_1) antagonist. Azelastine can be used for the research of allergic rhinitis, asthma, diabetic hyperlipidemic and SARS-CoV-2[1][2][3][4].

IC_{50} & Target

H_1 Receptor

In Vitro

Azelastine can significantly inhibit HNEpC proliferation, and therefore, be helpful in against airway remodeling[5].

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

Cell Proliferation Assay[5]

Cell Line:	Human nasal epithelial cells (HNEpC)
Concentration:	100 μM, 400 μM
Incubation Time:	21 days
Result:	Inhibited HNEpC growth.

Western Blot Analysis[5]

Cell Line:	Human nasal epithelial cells (HNEpC)
Concentration:	100 μM
Incubation Time:	7 days
Result:	Significantly up-regulated the H1R, M1R and M3R levels.

In Vivo

Azelastine (4 mg/kg; p.o.; daily; for 8 weeks) significantly reduces blood glucose, HbA1c and serum alkaline phosphatase (ALP), osteocalcin and downregulates apolipoprotein B in diabetic hyperlipidemic rats model[2].

Azelastine (4 mg/kg; p.o.; daily; for 8 weeks) improves the lipid profile (LDL-c decrease and HDL-c increase) in diabetic hyperlipidemic rats model[2].

Azelastine (4 mg/kg; p.o.; daily; for 8 weeks) attenuates calcium deposition and aortic calcification in diabetic hyperlipidemic rats model[2].

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

Animal Model:	Male albino Wistar rats (150-170 g), diabetic hyperlipidemic rats model[2]
Dosage:	4 mg/kg
Administration:	Oral administration, daily, for 8 weeks
Result:	Ameliorated aortic calcification and increased apolipoprotein A expression along with a decline in apolipoprotein B.

REFERENCES

[1]. Craig La Force. Review of the pharmacology, clinical efficacy, and safety of azelastine hydrochloridel. Expert Rev Clin Immunol. 2005 Jul;1(2):191-201.

[2]. Mohamed M Elseweidy, et al. Azelastine a potent antihistamine agent, as hypolipidemic and modulator for aortic calcification in diabetic hyperlipidemic rats model. Arch Physiol Biochem. 2020 Jul 2;1-8.

[3]. Carlos D. Zappia, et al. Azelastine potentiates antiasthmatic dexamethasone effect on a murine asthma model. Pharmacol Res Perspect. 2019 Dec; 7(6): e00531.

[4]. Li Yang, et al. Identification of SARS-CoV-2 entry inhibitors among already approved drugs. Acta Pharmacol Sin. 2020 Oct 28 : 1-7.

[5]. Shao-Cheng Liu, et al. Effect of budesonide and azelastine on histamine signaling regulation in human nasal epithelial cells. Eur Arch Otorhinolaryngol. 2017 Feb;274(2):845-853.

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