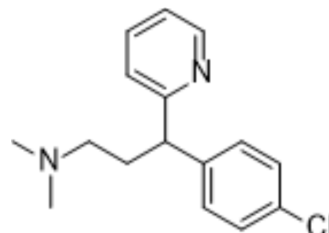


Chlorpheniramine

Cat. No.:	HY-B0286
CAS No.:	132-22-9
Molecular Formula:	C ₁₆ H ₁₉ ClN ₂
Molecular Weight:	274.79
Target:	Histamine Receptor
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Chlorpheniramine is a H1 antihistamines commonly used in allergic diseases research ^{[1][2]} .	
IC₅₀ & Target	IC ₅₀ : 43μM in BV2 microglial cells	
In Vitro	Chlorpheniramine shows antimalarial activity against P. falciparum (IC ₅₀ : 61.2 and 3.9 μM for D6 and Dd2 strain) ^[4] . Chlorpheniramine reduces the proton currents (IC ₅₀ : 43 μM) in BV2 microglial cells ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Cell Viability Assay	
	Cell Line:	Murine microglial BV2 cells ^[1] .
	Concentration:	100 μM
	Incubation Time:	5 min
	Result:	Inhibited proton currents with moderate potency.
In Vivo	Chlorpheniramine (50, 100 and 200 μg/kg; IM; 3 times, at intervals of 1 week) enhances white blood cells in the peripheral blood ^[2] . Chlorpheniramine (10 mg/kg, p.o) inhibits scratching in Ovalbumin (HY-W250978)-challenged BALB/c mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Sprague-Dawley (SD) rats ^[2] .
	Dosage:	50, 100 and 200 μg/kg
	Administration:	Chlorpheniramine (50, 100 and 200 μg/kg; IM; 3 times, at intervals of 1 week)
	Result:	Enhanced white blood cells in the peripheral blood, mostly due to the increases of B cells and monocytes, but not T cells and NK cells.

CUSTOMER VALIDATION

- Chemosphere. 2019 Jun;225:378-387.
- J Pharm Sci. 2019 Sep;108(9):2895-2904.

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REFERENCES

- [1]. Jiwon Kim, et al. Inhibitory effects of antihistamines, diphenhydramine and chlorpheniramine, on proton currents in BV2 microglial cells. *Eur J Pharmacol.* 2017 Mar 5;798:122-128.
- [2]. Kyung-Jin Jung, et al. Enhancement of B cell and monocyte populations in rats exposed to chlorpheniramine. *Arch Pharm Res.* 2012 Dec;35(12):2183-9.
- [3]. Takano, N., I. Arai, and M. Kurachi, Analysis of the spontaneous scratching behavior by NC/Nga mice: a possible approach to evaluate antipruritics for subjects with atopic dermatitis. *Eur J Pharmacol*, 2003. 471(3): p. 223-8.
- [4]. Kelly, J.X., et al., Design, synthesis, and evaluation of 10-N-substituted acridones as novel chemosensitizers in *Plasmodium falciparum*. *Antimicrob Agents Chemother*, 2007. 51(11): p. 4133-40.
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Caution: Product has not been fully validated for medical applications. For research use only.

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