

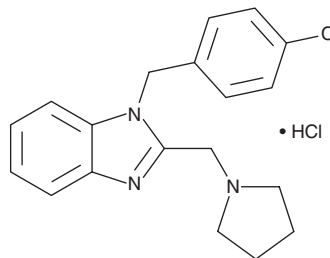
PRODUCT INFORMATION



Clemizole (hydrochloride)

Item No. 17695

CAS Registry No.: 1163-36-6
Formal Name: 1-[(4-chlorophenyl)methyl]-2-(1-pyrrolidinylmethyl)-1H-benzimidazole, monohydrochloride
Synonyms: AL 20, Allercur
MF: C₁₉H₂₀ClN₃ • HCl
FW: 362.3
Purity: ≥98%
UV/Vis.: λ_{max}: 205, 252, 276, 283 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Clemizole (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the clemizole (hydrochloride) in the solvent of choice. Clemizole (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of clemizole (hydrochloride) in these solvents is approximately 2, 10, and 5 mg/ml, respectively.

Clemizole (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, clemizole (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Clemizole (hydrochloride) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Clemizole is an antihistamine that antagonizes the histamine 1 receptor at high nanomolar concentrations.^{1,2} It less potently blocks transient receptor potential canonical channel 5 (TRPC5; IC₅₀ = 1.0-1.3 μM), with at least 6-fold selectivity for TRPC5 over other TRP channels.³ Clemizole also has hepatitis C antiviral action through inhibition of NS4B function, showing synergy with boceprevir (Item No. 18379), and it inhibits seizures in a zebrafish model of Dravet Syndrome.^{4,5}

References

1. Aguilar, M.-J., Morales-Olivas, F.J., and Rubio, E. Pharmacological investigation into the effects of histamine and histamine analogues on guinea-pig and rat colon *in vitro*. *Br. J. Pharmacol.* **88(3)**, 501-506 (1986).
2. Cortijo, J., Sanz, C., Perpiña, M., *et al.* Responses to histamine and selective H₂-receptor agonists in lung parenchymal strips from normal and sensitized guinea-pigs. *Agents Actions* **28(1-2)**, 45-52 (1989).
3. Richter, J.M., Schaefer, M., and Hill, K. Clemizole hydrochloride is a novel and potent inhibitor of transient receptor potential channel TRPC5. *Mol. Pharmacol.* **86(5)**, 514-521 (2014).
4. Einav, S., Sobol, H.D., Gehrig, E., *et al.* The hepatitis C virus (HCV) NS4B RNA binding inhibitor clemizole is highly synergistic with HCV protease inhibitors. *J. Infect. Dis.* **202(1)**, 65-74 (2010).
5. Baraban, S.C., Dinday, M.T., and Hortopan, G.A. Drug screening in Scn1a zebrafish mutant identifies clemizole as a potential Dravet syndrome treatment. *Nat. Commun.* **4:2410**, (2013).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/27/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM