

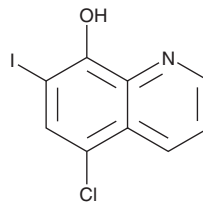
PRODUCT INFORMATION



Clioquinol

Item No. 10021

CAS Registry No.: 130-26-7
Formal Name: 5-chloro-7-iodo-8-quinolinol
Synonyms: Iodochlorohydroxyquin, NSC 3531,
NSC 74938
MF: C₉H₅ClINO
FW: 305.5
Purity: ≥95%
UV/Vis.: λ_{max}: 255, 324 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Clioquinol is supplied as a solid. A stock solution may be made by dissolving the clioquinol in the solvent of choice. Clioquinol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of clioquinol in these solvents is approximately 30 mg/ml.

Clioquinol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, clioquinol should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Clioquinol has a solubility of approximately 0.5 mg/ml in a 1:8 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Clioquinol is a metal-chelating antimicrobial agent with neuroprotective properties.¹⁻³ It inhibits the growth of *A. fumigatus* with MIC values of 1, >32, 8, and 16 µg/ml in media containing no metal, iron, zinc, and copper, respectively.¹ Clioquinol (37 mg/kg) decreases neuronal loss in the substantia nigra pars compacta (SNc) and increases time spent in the novel arm of a Y-maze in the α-synuclein hA53T transgenic mouse model of Parkinson's disease.² It reduces brain atrophy and iron content, increases nigral tyrosine hydroxylase phosphorylation, and rescues behavioral impairments in the rotarod and Y-maze tests in tau knockout mice.³

References

1. Ben Yaakov, D., Shadkchan, Y., Albert, N., *et al.* The quinoline bromoquinol exhibits broad-spectrum antifungal activity and induces oxidative stress and apoptosis in *Aspergillus fumigatus*. *J. Antimicrob. Chemother.* **72(8)**, 2263-2272 (2017).
2. Finkelstein, D.I., Hare, D.J., Billings, J.L., *et al.* Clioquinol improves cognitive, motor function, and microanatomy of the α-Synuclein hA53T transgenic mice. *ACS Chem. Neurosci.* **7(1)**, 119-129 (2016).
3. Lei, P., Ayton, S., Appukuttan, A.T., *et al.* Clioquinol rescues Parkinsonism and dementia phenotypes of the tau knockout mouse. *Neurobiol. Dis.* **81**, 168-175 (2015).

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.

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