# Closantel sodium

**Cat. No.:** HY-17596A

**CAS No.:** 61438-64-0

**Molecular Formula:** $C_{22}H_{13}Cl_2I_2N_2NaO_2$

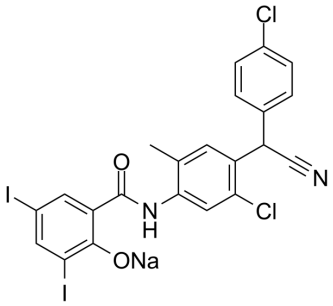
**Molecular Weight:** 685.06

**Target:** Parasite

**Pathway:** Anti-infection

**Storage:** 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 125 mg/mL (182.47 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 1.4597 mL | 7.2986 mL | 14.5973 mL |
| | 5 mM | 0.2919 mL | 1.4597 mL | 2.9195 mL |
| | 10 mM | 0.1460 mL | 0.7299 mL | 1.4597 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.04 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Closantel sodium is a halogenated salicylanilide with a potent anti-parasitic activity. Closantel sodium is a potent and highly specific Onchocerca volvulus chitinase (OvCHT1) inhibitor with an $IC_{50}$ of 1.6 μM and a $K_i$ of 468 nM. Closantel sodium inhibits the O. volvulus L3 to L4 molt of developing[1][2].

**In Vitro**

Closantel sodium, a known anthelmintic drug, is highly specific forfilarial family chitinases compared to those fromprotozoans and the human chitinase, human chitotriosidase[1].

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

## CUSTOMER VALIDATION

- J Mol Cell Biol. 2023 Mar 15;mjad017.

- Cancers. 2020 Mar 2;12(3):575.
- J Biol Chem. 2022 Aug 26;102417.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Amanda L Garner, et al. Design, synthesis, and biological activities of closantel analogues: structural promiscuity and its impact on Onchocerca volvulus. J Med Chem. 2011 Jun 9;54(11):3963-72.

[2]. G E Swan, et al. The pharmacology of halogenated salicylanilides and their anthelmintic use in animals. J S Afr Vet Assoc. 1999 Jun;70(2):61-70.



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