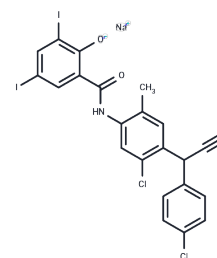


Closantel Sodium

Chemical Properties

CAS No. :	61438-64-0
Formula:	C ₂₂ H ₁₃ Cl ₂ I ₂ N ₂ O ₂ ·Na
Molecular Weight:	685.06
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Closantel is a salicylanilide anthelmintic compound; exhibits different anthelmintic spectra and apparent toxicity in mammals.
Targets(IC50)	Antibacterial,Parasite
In vitro	Closantel inhibits drug resistant <i>S. aureus</i> and <i>E. faecium</i> with MICs of 1 µg/mL and 1 µg/mL. Closantel inhibits MRSA and <i>E. faecalis</i> with MICs of 2 µg/mL and 1 µg/mL. [1] Closantel completely blocks the infection of host cells with <i>E. chaffeensis</i> or <i>A. phagocytophilum</i> , treatment of infected cells 1 day post infection with closantel clears infection in dose-dependent manner. Closantel inhibits the autokinase activities of the three <i>E. chaffeensis</i> sensor kinases from <i>E. chaffeensis</i> . [2] Closantel (50 µg/mL) causes an initial burst of contractions of much greater amplitude and frequency than normal in tissue vessel, the stimulation of amplitude and frequency lasted for nearly 15 min and is accompanied by a rise in muscle tone, which reaches a maximum at 16 min, at a level greater than 1.5 times the maximal normal amplitude. [3]
In vivo	Closantel (10 mg/kg) results in gross surface damage from 24 hours onwards in rats administrated with 25 metacercarial cysts of <i>F. hepatica</i> , in the form of erosion of the anterior and posterior extremities of the fluke and large-scale sloughing of the tegument on both dorsal and ventral surfaces. [3] Closantel (7.5 mg/kg) combined with broad-spectrum anthelmintic is very effective against <i>H. contortus</i> but ineffective against <i>Trichostrongylus</i> spp in lambs. [4] Closantel significantly reduces isotope levels in closantel-resistant adult <i>Haemonchus contortus</i> infected sheep. [5]

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 93 mg/mL (135.75 mM),Sonication is recommended. Ethanol: 93 mg/mL (135.75 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (4.82 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4597 mL	7.2986 mL	14.5973 mL
5 mM	0.2919 mL	1.4597 mL	2.9195 mL
10 mM	0.146 mL	0.7299 mL	1.4597 mL
50 mM	0.0292 mL	0.146 mL	0.2919 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Hlasta DJ, et al. *Bioorg Med Chem Lett*, 1998, 8(14), 1923-1928.
- Cheng Z, et al. *Cell Microbiol*, 2006, 8(8), 1241-1252.
- Skuce PJ, et al. *Parasitol Res*, 1990, 76(3), 241-250.
- Dash KM, et al. *Aust Vet J*, 1986, 63(1), 4-7.
- Rothwell J, et al. *Int J Parasitol*, 1997, 27(3), 313-319.

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