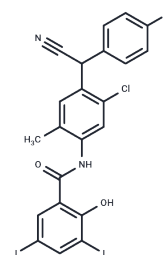


## Closantel

## Chemical Properties

CAS No. :	57808-65-8
Formula:	C <sub>22</sub> H <sub>14</sub> Cl <sub>2</sub> I <sub>2</sub> N <sub>2</sub> O <sub>2</sub>
Molecular Weight:	663.07
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 (R-31520), a salicylanilide anthelmintic compound, shows different anthelmintic spectra and obvious toxicity in mammals.
Targets(IC50)	Antibacterial,Parasite
In vitro	Closantel (7.5 mg/kg) in combination with a broad-spectrum anthelmintic shows moderate efficacy against caprine Trichostrongylus spp, but is highly effective against Haemonchus contortus. In mice with Fasciola hepatica metacercarial cysts, treatment with closantel (10 mg/kg) leads to extensive peeling on the anterior and posterior extremities, as well as the dorsal and ventral surfaces, resulting in significant overall dermal damage 24 hours post-administration. Furthermore, in sheep infected with resistant H. contortus strains, isotope levels following treatment with radiolabeled closantel are significantly lower compared to susceptible worms.
In vivo	Compared to normal conditions, Closantel (50 µg/mL) induces vascular tissue to contract with greater amplitude and higher frequency, reaching a peak muscle tension after approximately 15 minutes, with the amplitude exceeding 1.5 times that of the maximum normal contraction. Additionally, Closantel effectively blocks the infection of host cells by A. phagocytophilum or E. chaffeensis and can clear infections after a one-day treatment in a dose-dependent manner. It also inhibits drug-resistant Enterococcus faecium and Staphylococcus aureus, with minimum inhibitory concentrations (MICs) of 1 µg/mL, and Methicillin-resistant Staphylococcus aureus (MRSA) with a MIC of 2 µg/mL. Moreover, Closantel inhibits the autophosphorylation activity of three sensor kinases derived from E. chaffeensis.

## Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 55 mg/mL (82.95 mM),Sonication is recommended. H <sub>2</sub> O: < 1 mg/mL (insoluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (3.02 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</i>

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In vivo Formulation	<i>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>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5081 mL	7.5407 mL	15.0814 mL
5 mM	0.3016 mL	1.5081 mL	3.0163 mL
10 mM	0.1508 mL	0.7541 mL	1.5081 mL
50 mM	0.0302 mL	0.1508 mL	0.3016 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

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Dash KM, et al. Aust Vet J, 1986, 63(1), 4-7.

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