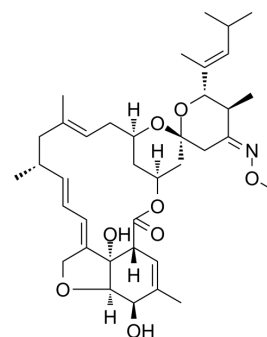


## Moxidectin

<b>Cat. No.:</b>	HY-B0777		
<b>CAS No.:</b>	113507-06-5		
<b>Molecular Formula:</b>	C <sub>37</sub> H <sub>53</sub> NO <sub>8</sub>		
<b>Molecular Weight:</b>	639.82		
<b>Target:</b>	Antibiotic; BCRP; P-glycoprotein; Parasite		
<b>Pathway:</b>	Anti-infection; Membrane Transporter/Ion Channel		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 100 mg/mL (156.29 mM; Need ultrasonic)  
H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.5629 mL	7.8147 mL	15.6294 mL
	5 mM	0.3126 mL	1.5629 mL	3.1259 mL
	10 mM	0.1563 mL	0.7815 mL	1.5629 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (3.91 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 2.5 mg/mL (3.91 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (3.91 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Moxidectin (CL301423) is an orally active macrolide (ML) anthelmintic for the prevention and control of heartworms and roundworms. Moxidectin is also a substrate of BCRP and P-glycoprotein (P-gp) in vivo, and is secreted into breast milk and effluxed from the host and parasite mediated by Bcrp1 and P-gp. This may be related to the presence of chemical residues in milk<sup>[1][2][3]</sup>.

#### In Vivo

Moxidectin (0.2 mg/kg; po or iv; single dose) has higher concentrations in plasma and brain in mdr1<sup>ac</sup> mice than in wild-type

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mice<sup>[3]</sup>.

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

## CUSTOMER VALIDATION

- Patent. US20180271888A1.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Moxidectin, From Wikipedia

[2]. Kiki-Mvouaka S, et al. Role of P-glycoprotein in the disposition of macrocyclic lactones: A comparison between ivermectin, eprinomectin, and moxidectin in mice. *Drug Metab Dispos.* 2010 Apr;38(4):573-80.

[3]. Perez M, et al. In vitro and in vivo interaction of moxidectin with BCRP/ABCG2. *Chem Biol Interact.* 2009 Jun 15;180(1):106-12.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA