



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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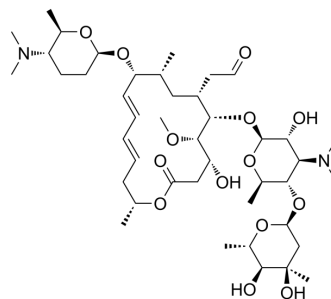
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## Spiramycin

<b>Cat. No.:</b>	HY-100593		
<b>CAS No.:</b>	8025-81-8		
<b>Molecular Formula:</b>	C <sub>43</sub> H <sub>74</sub> N <sub>2</sub> O <sub>14</sub>		
<b>Molecular Weight:</b>	843.05		
<b>Target:</b>	Bacterial; Parasite; Antibiotic		
<b>Pathway:</b>	Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (118.62 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.1862 mL	5.9308 mL	11.8617 mL
	5 mM	0.2372 mL	1.1862 mL	2.3723 mL
	10 mM	0.1186 mL	0.5931 mL	1.1862 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 (2.97 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (2.97 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (2.97 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Spiramycin (Rovamycin) is a macrolide antibiotic produced by *Streptomyces ambofaciens* with against bacteria and *Toxoplasma gondii* activities, and also has antiparasitic effect. Spiramycin is composed of a 16-member lactone ring, on which three sugars (mycaminose, forosamine, and mycarose) are attached<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

Macrolide	Toxoplasma
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## In Vitro

Spiramycin (24 hours; 1-1000  $\mu$ M; T. gondii infected HeLa cells and HeLa cells) treatment reduces the cytotoxicity, and shows anti-Toxoplasma gondii activity, with IC<sub>50</sub> values of 189  $\mu$ M for HeLa cells; and 262  $\mu$ M for T. gondii-infected HeLa cells<sup>[3]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### Cell Cytotoxicity Assay<sup>[3]</sup>

Cell Line:	T. gondii infected HeLa cells and HeLa cells
Concentration:	1-1000 $\mu$ M
Incubation Time:	24 hours
Result:	Reduced the cytotoxicity.

## In Vivo

Spiramycin (100 mg/kg; intraperitoneal injection; every day; for 4 days; female KM mice) treatment reduces the number of tachyzoites, and reduces hepatotoxicity and significantly enhances antioxidative effects. Spiramycin treatment also decreases in the degree of granulomatous inflammation in the liver<sup>[3]</sup>.

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

Animal Model:	36 female KM mice with T.gondii <sup>[3]</sup>
Dosage:	100 mg/kg
Administration:	Intraperitoneal injection; every day; for 4 days
Result:	The number of tachyzoites was significantly reduced. Reduced hepatotoxicity and significantly enhanced antioxidative effects. Granuloma and cyst formation were inhibited.

## CUSTOMER VALIDATION

- Cell Prolif. 2021 Jan;54(1):e12953.

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

## REFERENCES

[1]. Nguyen HC, et al. Post-PKS tailoring steps of the spiramycin macrolactone ring in Streptomyces ambofaciens. Antimicrob Agents Chemother. 2013 Aug;57(8):3836-42.

[2]. Etewa SE, et al. Assessment of spiramycin-loaded chitosan nanoparticles treatment on acute and chronic toxoplasmosis in mice. J Parasit Dis. 2018 Mar;42(1):102-113.

[3]. Guo HY, et al. Synthesis and Biological Evaluation of (+)-Usnic Acid Derivatives as Potential Anti-Toxoplasma gondii Agents. J Agric Food Chem. 2019 Aug 28;67(34):9630-9642.

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

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