

## Milbemycin A3

## Chemical Properties

CAS No. :	51596-10-2
Formula:	C <sub>31</sub> H <sub>44</sub> O <sub>7</sub>
Molecular Weight:	528.69
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

## Biological Description

Description	Milbemycin A3 is a macrocyclic lactone compound produced by fermentation of <i>Streptomyces hygroscopicus</i> , characterized by a spiroketal structure. It enhances the activity of Glutamate-gated chloride channel and GABA-gated chloride channels, thereby disrupting neurotransmission in parasites and exhibiting acaricidal and nematocidal activities.
Targets(IC50)	GABA Receptor

## Solubility Information

Solubility	Methanol: Soluble DMF: Soluble DMSO: 26.67 mg/mL (50.45 mM), Sonication is recommended. Ethanol: Soluble (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8915 mL	9.4573 mL	18.9147 mL
5 mM	0.3783 mL	1.8915 mL	3.7829 mL
10 mM	0.1891 mL	0.9457 mL	1.8915 mL
50 mM	0.0378 mL	0.1891 mL	0.3783 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

Nakagawa K, et al. Microbial conversion of milbemycins: hydroxylation of milbemycin A4 and related compounds by *Cunninghamella echinulata* ATCC 9244. *J Antibiot (Tokyo)*. 1991;44(2):232-240.

Yang L Y, et al. New nemadectin congeners with acaricidal and nematocidal activity from *Streptomyces microflavus* neau3 Y-3[J]. *Bioorganic & medicinal chemistry letters*, 2013, 23(20): 5710-5713.

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