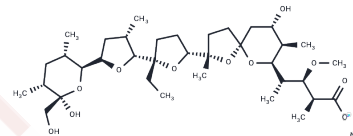


Monensin sodium salt

Chemical Properties

CAS No. :	22373-78-0
Formula:	C ₃₆ H ₆₁ NaO ₁₁
Molecular Weight:	692.85
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	Monensin sodium is an antiprotozoal agent produced by <i>Streptomyces cinnamonensis</i> . Monensin sodium salt (Monensin A sodium salt) causes a marked enlargement of the MVBs and regulates exosome secretion
Targets(IC50)	Apoptosis, Antibacterial, Antibiotic, Parasite, Antifungal, Sodium Channel, Wnt/beta-catenin
In vitro	Monensin sodium salt (Coban), isolated from <i>Streptomyces cinnamonensis</i> , is a well-known representative of naturally polyether ionophore antibiotics. Monensin is an ionophore related to the crown ethers with a preference to form complexes with monovalent cations such as: Li ⁺ , Na ⁺ , K ⁺ , Rb ⁺ , Ag ⁺ , and Tl ⁺ . [1] Monensin A is able to transport these cations across lipid membranes of cells, playing an important role as a Na ⁺ /H ⁺ antiporter. It blocks intracellular protein transport, and exhibits antibiotic, antimalarial, and other biological activities. [2] The antibacterial properties of monensin and its derivatives are a result of their ability to transport metal cations through cellular and subcellular membranes. [3]
In vivo	LD50: Mice 335 mg/kg (i.g.) [4]; Rats 36.5 mg/kg (i.g.); Chickens 185 mg/kg (i.g.). [5]

Solubility Information

Solubility	Ethanol: 12.5 mg/mL (18.04 mM), Sonication is recommended. DMSO: < 1 mg/mL (insoluble or slightly soluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% EtOH+90% Corn Oil: 1 mg/mL (1.44 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	1.4433 mL	7.2166 mL	14.4331 mL
5 mM	0.2887 mL	1.4433 mL	2.8866 mL
10 mM	0.1443 mL	0.7217 mL	1.4433 mL
50 mM	0.0289 mL	0.1443 mL	0.2887 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

Pinkerton M, et al. J Mol Biol, 1970, 49(3), 533-546.

Duan X, Chen H, Zhou X, et al. EBV infection in epithelial malignancies induces resistance to antitumor natural killer cells via F3-mediated platelet aggregation. Cancer Research. 2022

Zhang X, Wu S, Liu J, et al. A Mosaic Nanoparticle Vaccine Elicits Potent Mucosal Immune Response with Significant Cross-Protection Activity against Multiple SARS-CoV-2 Sublineages. Advanced Science. 2023: 2301034.

Mollenhauer HH, et al. Biochim Biophys Acta, 1990, 1031(2), 225-246.

Huczynski A, et al. Bioorg Med Chem Lett, 2008, 18(8), 2585-2589.

He X, Zhang X, Wu B, et al. The receptor binding domain of SARS-CoV-2 Omicron subvariants targets Siglec-9 to decrease its immunogenicity by preventing macrophage phagocytosis. Nature Immunology. 2024: 1-11.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481