

## Thanatin acetate

### Chemical Properties

CAS No. :

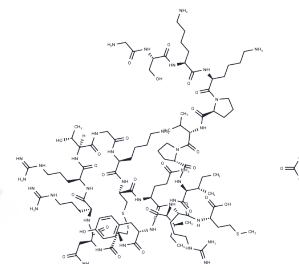
Formula: C105H181N35O29S3

Molecular Weight: 2493.97

Keep away from moisture

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	Thanatin acetate is a cationic peptide with antimicrobial activity, inhibiting the growth of bacteria and fungi by targeting the LptC-LptA interaction and destabilizing the LptA complex involved in lipopolysaccharide transport.
Targets(IC50)	Antibacterial
In vitro	Thanatin acetate binds to two Lpt proteins with high affinity, and the Kd values of LptA and LptD are 16 nM and 39 nM, respectively. Thanatin acetate (70 µM) did not change the membrane permeability of bacteria. [1]
In vivo	Thanatin acetate (1, 3, 6 mg/kg, intraperitoneally administered) protects mice infected with NDM-1-produced E. coli. [2]

### Solubility Information

Solubility	DMSO: 145 mg/mL (58.14 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (4.01 mM), Solution. <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	0.401 mL	2.0048 mL	4.0097 mL
5 mM	0.0802 mL	0.401 mL	0.8019 mL
10 mM	0.0401 mL	0.2005 mL	0.401 mL
50 mM	0.008 mL	0.0401 mL	0.0802 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

Dash R, et al. Thanatin: An Emerging Host Defense Antimicrobial Peptide with Multiple Modes of Action. *Int J Mol Sci.* 2021 Feb 3;22(4):1522.

Ma B, et al. The antimicrobial peptide thanatin disrupts the bacterial outer membrane and inactivates the NDM-1 metallo- $\beta$ -lactamase. *Nat Commun.* 2019 Aug 6;10(1):3517.

**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