

## SPR741 acetate

## Chemical Properties

CAS No. :

Formula: C46H77N13O15

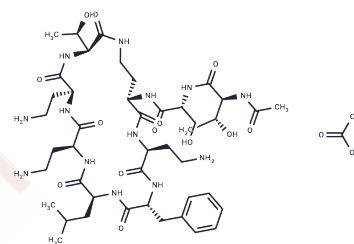
Molecular Weight: 1052.18

Storage:

Store at low temperature, Keep away from moisture

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   | SPR741 acetate is a cationic peptide derived from polymyxin B. It exhibits antimicrobial activity against gram-negative bacteria by inhibiting severe gram-negative bacterial sensory by increasing the permeability of the outer membrane of gram-negative bacteria. SPR741 acetate is often used in conjunction with antibiotics for the treatment of a number of diseases.  |
| Targets(IC50) | Antibacterial  |
| In vitro      | SPR741 acetate potentiates antibiotics, SPR741 acetate are substrates of the AcrAB-TolC efflux pump in E. coli, effectively circumventing the contribution of this pump to intrinsic antibiotic resistance. The intrinsic resistance of E. coli to certain antibiotics that is mediated by both the outer membrane and the AcrAB-TolC efflux system can be overcome, or circumvented, by combining the antibiotic with SPR741 acetate but that potentiation of intrinsic resistance due primarily to efflux may be limited.[1] |
| In vivo       | SPR741 acetate has the ability to permeabilize the outer membrane of Gram-negative bacteria, thus making them sensitive to hydrophobic antibiotics. SPR741 acetate has a significantly safety profile of compared to that of polymyxin B, which suffers severe, dose-limiting nephrotoxicity in humans. Polymyxin B exhibited nephrotoxicity at a far-lower exposure-normalized dose than SPR741 acetate in multiday rodent and nonhuman primate studies.[1]   |

## Solubility Information

|            |   |
|------------|---|
| Solubility | DMSO: 117 mg/mL (111.2 mM), Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
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### Preparing Stock Solutions

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|       | <b>1mg</b> | <b>5mg</b> | <b>10mg</b> |
|-------|------------|------------|-------------|
| 1 mM  | 0.9504 mL  | 4.752 mL   | 9.5041 mL   |
| 5 mM  | 0.1901 mL  | 0.9504 mL  | 1.9008 mL   |
| 10 mM | 0.095 mL   | 0.4752 mL  | 0.9504 mL   |
| 50 mM | 0.019 mL   | 0.095 mL   | 0.1901 mL   |

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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

Corbett D, et al. Potentiation of Antibiotic Activity by a Novel Cationic Peptide: Potency and Spectrum of Activity of SPR74Antimicrob Agents Chemother. 2017 Jul 25;61(8). pii: e00200-17.

Eckburg PB, et al. Safety, Tolerability, Pharmacokinetics, and Drug Interaction Potential of SPR741, an Intravenous Potentiator, after Single and Multiple Ascending Doses and When Combined with  $\beta$ -Lactam Antibiotics in Healthy Subjects. Antimicrob Agents Chemother. 2019 Aug 23;63(9). pii: e00892-19.

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