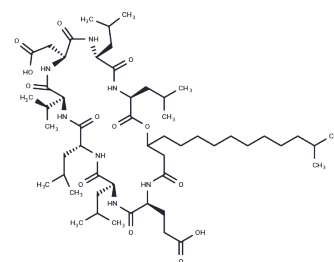


## Surfactin

### Chemical Properties

CAS No. : 24730-31-2  
Formula: C<sub>53</sub>H<sub>93</sub>N<sub>7</sub>O<sub>13</sub>  
Molecular Weight: 1036.34  
Appearance: no data available  
Storage: keep away from moisture  
Powder: -20°C for 3 years | In solvent: -80°C for 1 year



### Biological Description

|               |                                                                                                                                                                                                                                                                                                                                                                        |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Description   | Surfactin is a potent cyclic lipopeptide biosurfactants that mediates flux of mono-and divalent cations, such as calcium, across lipid bilayer membranes, with anti-bacterial, anti-fungal, antimycoplasma and hemolytic effects.                                                                                                                                      |
| Targets(IC50) | HSV                                                                                                                                                                                                                                                                                                                                                                    |
| In vitro      | Surfactin is used as a surfactant to mediate flux of mono-and divalent cations, such as calcium, across lipid bilayer membranes. surfactin can increase the activity of amoxicillin against avian pathogenic Escherichia coli (APEC) in vitro with antimicrobial assays such as minimum inhibitory concentrations (MIC) and fractional inhibitory concentration (FIC). |
| In vivo       | in the model of chick infection, surfactin exerted adjuvant effects with amoxicillin against APEC by lowering the numerical value of mortality and liver bacterial loads, and regulating the expression of inflammatory cytokines et al.We concluded that surfactin can act as a novel antimicrobial adjuvant with amoxicillin against AEPC infection in chicken.      |

### Solubility Information

|            |                                                                                                                                                                                                |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solubility | H <sub>2</sub> O: 28.25 mg/mL (27.26 mM),Sonication is recommended.<br>DMSO: 47 mg/mL (45.35 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Preparing Stock Solutions

|       | 1mg       | 5mg       | 10mg      |
|-------|-----------|-----------|-----------|
| 1 mM  | 0.9649 mL | 4.8247 mL | 9.6493 mL |
| 5 mM  | 0.193 mL  | 0.9649 mL | 1.9299 mL |
| 10 mM | 0.0965 mL | 0.4825 mL | 0.9649 mL |
| 50 mM | 0.0193 mL | 0.0965 mL | 0.193 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.

### Reference

Liu J, et al. Sensitization of avian pathogenic *Escherichia coli* to amoxicillin in vitro and in vivo in the presence of surfactin. *PLoS One*. 2019 Sep 12;14(9):e0222413.

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