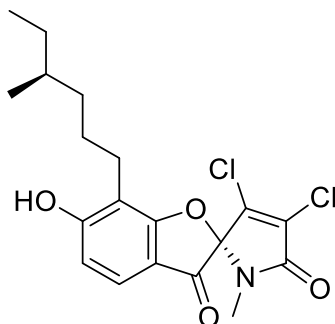


Armeniaspirol C

Code No.: **BIA-A2950**

Pack sizes: **0.25 mg, 1 mg**



Synonyms :

Specifications

CAS #	: 1206881-49-3
Molecular Formula	: C ₁₉ H ₂₁ Cl ₂ NO ₄
Molecular Weight	: 398.3
Source	: <i>Streptomyces</i> sp.
Appearance	: White solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO.

Application Notes

Armeniaspirol C is a minor component of the complex produced by *Streptomyces armeiacus*, discovered by researchers at Sanofi in 2012. Armeniaspirols are a novel class of antibiotics with a unique chlorinated spiro[4.4]non-8-ene scaffold, potentially active against Gram-positive pathogens including MRSA and VRE. The A analogue of Armeniaspirol C is a protonophore disrupting the membrane potential and decreases oxygen consumption in mitochondria. Armeniaspirols inhibits the ATP-dependent proteases ClpXP and ClpYQ in vitro and in the model Gram-positive *Bacillus subtilis*. The pyrrole chloro group and the methyl group appear to be important for antimicrobial activities.

References

1. Isolation and structural elucidation of armeniaspirols A–C: Potent antibiotics against Gram-positive pathogens. Dufour C. et al. *Chem Eur J* 2012, 18, 16123.
2. Characterization of the biosynthetic gene cluster for the antibiotic armeniaspirols in *Streptomyces armeiacus*. Qiao Y. et al. *J Nat Prod* 2019, 82, 318.
3. Armeniaspirols inhibit the AAA+ proteases ClpXP and ClpYQ leading to cell division arrest in Gram-positive bacteria. Labana P. et al. *Cell Chem Biol* 2021, 28, P1703.
4. Total synthesis and mechanism of action of the antibiotic armeniaspirol A. Arisetti N. et al. *Chem Sci* 2021, 12, 16023.