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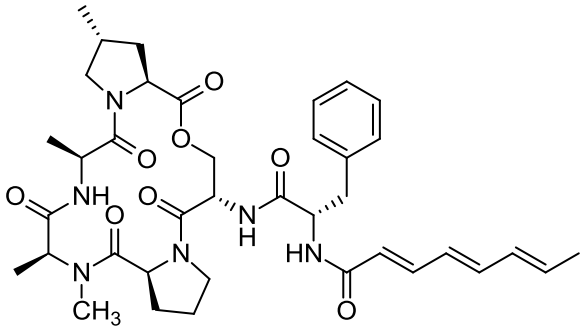
PRODUCT DATA SHEET

A 54556A

Code No.: **BIA-A1570**

Pack sizes: **1 mg, 5 mg**



Synonyms :

Specifications

CAS #	:	**95398-45-1**
Molecular Formula	:	**$C_{38}H_{50}N_6O_8$**
Molecular Weight	:	**718.8**
Source	:	***Streptomyces* sp.**
Appearance	:	**Light tan**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO.**

Application Notes

A 54556A is an unusual depsipeptide isolated from Streptomyces hawaiiensis by researchers at Eli Lilly in 1985, featuring a trienone side chain. A 54556A is potently active against Gram positive and Gram negative bacteria, including MRSA. A 54556A was the original lead structure of the recently re-discovered acyldepsipeptide (ADEP) antibiotics that act by activating and disregulating Clp-family proteins. ADEPs are considered important leads in the development of new generations of antibiotics against resistant bacteria.

References

1. A54556 antibiotics and process for production thereof. Michel K.H. and Kastner R.E. U.S. Patent 4,492,650 1985.
2. Structures of ClpP in complex with acyldepsipeptide antibiotics reveal its activation mechanism. Lee B-G. et al., Nat. Struct. Molec. Biol. 2010, 17, 471.
3. Antibiotic acyldepsipeptides activate ClpP peptidase to degrade the cell division protein FtsZ. Sass P. et al., PNAS 2011, 108, 17474.

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