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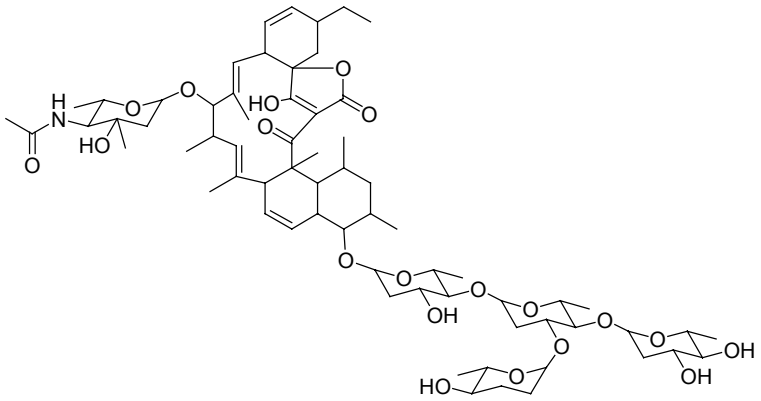
PRODUCT DATA SHEET

Saccharocarcin A

Code: **BIA-S1134**

Pack sizes: **0.5 mg, 2.5 mg**



Synonyms : **-**

Specifications

CAS #	:	**158475-32-2**
Molecular Formula	:	**$C_{67}H_{101}NO_{20}$**
Molecular Weight	:	**1240.5**
Source	:	***Amycolatopsis* sp. MST-AS5337**
Appearance	:	**White solid**
Purity	:	**> 95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility**

Application Notes

Saccharocarcin A is an unusual tetronic acid structurally related to kijanimicin, chlorothricin, tetrocarcins and versipelostatin which has pronounced activity against Gram positive bacteria and *Chlamydia trachomatis*. Limited availability has restricted further investigation of this metabolite in the literature. However, several members of this class have received considerable literature focus. Versipelostatin was shown to inhibit transcription from the promoter of GRP78, a gene that is activated as part of a stress signaling pathway under glucose deprivation resulting in unfolded protein response (UPR). The UPR-inhibitory action was seen only in conditions of glucose deprivation and caused selective and massive killing of the glucose-deprived cells. Tetrocarcin A appears to target the phosphatidylinositide-3'-kinase/Akt signaling pathway.

References

1. A family of novel macrocyclic lactones, the saccharocarcins produced by *Saccharothrix aerocolonigenes* subsp. *antibiotica*. I. Taxonomy, Fermentation, Isolation, and Biological Properties. Horan A.C. et al*., J. Antibiot.* **1997**, 50, 119.
2. A family of novel macrocyclic lactones, the saccharocarcins produced by *Saccharothrix aerocolonigenes* subsp. *antibiotica*. II. Physico-chemical Properties and Structure Determination. Hegde V.R. et al., *J. Antibiot.* **1997**, 50, 126.
3. Effect on tumor cells of blocking survival response to glucose deprivation. Park H.R. *J. Natl. Cancer. Inst*. **2004**, 96, 1300.
4. Apoptosis and inactivation of the PI3-kinase pathway by tetrocarcin A in breast cancers. Nakajima H. *Biochem Biophys Res Commun.* **2007**, 356, 260.

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