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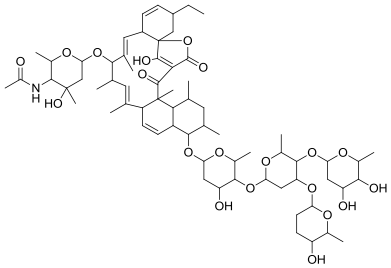
PRODUCT DATA SHEET

Saccharocarcin A

Code No.: **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.**
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, tetrocarcin and versipelostatin, which has pronounced activity against Gram positive bacteria and Chlamydia trachomatis. Limited availability has restricted further investigation of this metabolite, however several members of this class have received considerable literature focus. Versipelostatin inhibits transcription from the promoter of GRP78, a gene that is activated as part of a stress signalling pathway under glucose deprivation resulting in unfolded protein response (UPR), causing death of glucose-deprived cells. Tetrocarcin A appears to target the phosphatidylinositide-3'-kinase/Akt signalling 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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Building C, 28-54 Percival Road, Smithfield, NSW 2164, AUSTRALIA

Tel: 61 2 9757 4515 Fax: 61 2 9757 2586 Web: www.bioaustralis.com Email: info@bioaustralis.com