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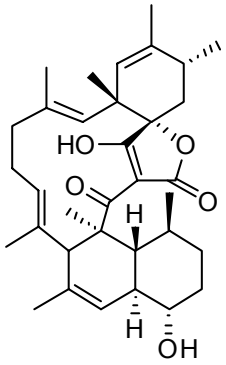
PRODUCT DATA SHEET

Tetromycin B

Code: **BIA-T1181**

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



Synonyms : **-**

Specifications

CAS #	:	**180027-84-3**
Molecular Formula	:	**$C_{34}H_{46}O_5$**
Molecular Weight	:	**534.7**
Source	:	***Streptomyces* sp. MST-AS4903**
Appearance	:	**Light tan solid**
Purity	:	**>99% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO. Moderately soluble in water.**

Application Notes

Tetromycin B is an unusual tetronic acid structurally related to kijanimicin, chlorothricin, saccharocarcin, tetrocarcin and versipelostatin. Tetromycin B has pronounced activity against antibiotic susceptible and resistant Gram positive bacteria including MRSA. Limited availability has restricted further investigation of this metabolite in the literature. 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 signalling 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 signalling pathway.

References

1. Antibiotic tetromycin A and B and its production. Takeuchi T. et al., Japan Patent **1996**, 08-165286.
2. Effect on tumor cells of blocking survival response to glucose deprivation. Park H.R. et al., J. Natl. Cancer. Inst. **2004**, 96, 1300.
3. Apoptosis and inactivation of the PI3-kinase pathway by tetrocarcin A in breast cancers. Nakajima H. et al., Biochem Biophys Res Commun. **2007**, 356, 260.

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