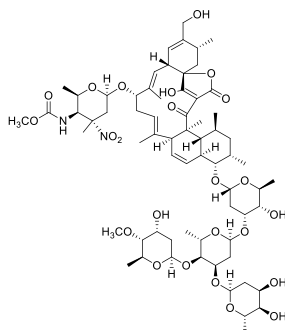


Kijanimicin

Code No.: **BIA-K1153**

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



Synonyms : Sch 25663

Specifications

CAS #	: 78798-08-0
Molecular Formula	: C₆₇H₁₀₀N₂O₂₄
Molecular Weight	: 1317.5
Source	: <i>Actinomadura</i> 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

Kijanimicin is a tetrone acid related to saccharocarcin, chlorothricin, versipelostatin and tetrocarcin. Like the tetrocarcins, kijanimicin contains an unusual nitroaminoglycoside. Kijanimicin is a potent antibacterial, antimalarial and antitumor active. 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). The UPR-inhibitory action is seen only in conditions of glucose deprivation and causes selective and massive killing of the glucose-deprived cells. Tetrocarcin A appears to target the phosphatidylinositide-3'-kinase/Akt signalling pathway.

References

1. Kijanimicin (Sch 25663), a novel antibiotic produced by *Actinomadura kijaniata* SCC1256. Waitz, J.A. et al., *J. Antibiot.*, 1981, 34, 1101.
2. Antitumor activity of kijanimicin Bradner W. T. *J. Antibiot.* 1983, 36, 1078.
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.