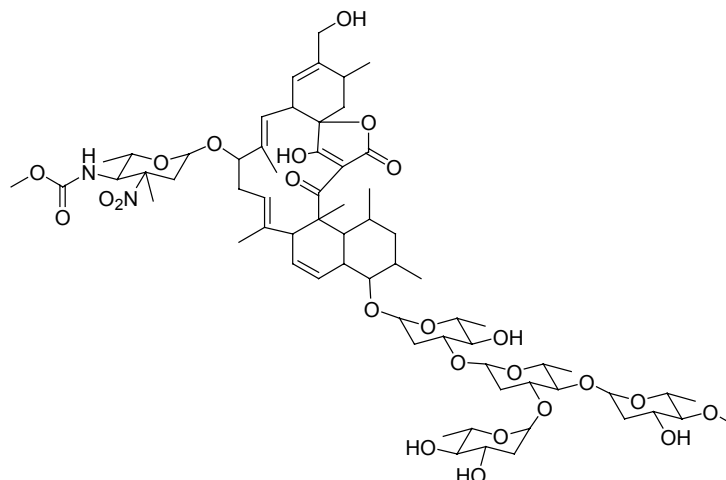


Kijanimicin

Code: **BIA-K1153**

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



Synonyms : **Antibiotic Sch 25663**

Specifications

CAS # : **78798-08-0**

Molecular Formula : **C₆₇H₁₀₀NO₂₄**

Molecular Weight : **1317.5**

Source : ***Actinomadura* sp. MST-AS4966**

Appearance : **White solid**

Purity : **> 99% 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 nitro-aminoglycoside. Kijanimicin has potent antibacterial, antimalarial and antitumor activity. 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. 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.