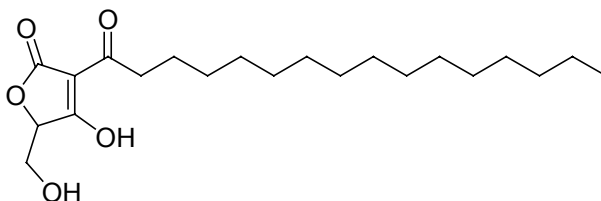


Antibiotic RK-682

Code: **BIA-R1082**

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



Synonyms : **Antibiotic TAN 1364B, Antibiotic CI 010**

Specifications

CAS # : **154639-24-4 (TAN 1364B)**
Molecular Formula : **C₂₁H₃₆O₅**
Molecular Weight : **368.5**
Source : ***Streptomyces* sp. MST-AS5358**
Appearance : **Tan lyophilisate**
Purity : **> 95% by HPLC as Ca salt**
Long Term Storage : **-20°C**
Solubility : **Soluble in ethanol, methanol, DMF or DMSO.**

Application Notes

Antibiotic RK-682 is the calcium salt of one of a complex family of tetronic acids isolated from *Streptomyces* species. The formation of the salt is almost certainly an artefact of silica chromatography. RK-682 is the most extensively studied of the analogues, having been shown to inhibit protein tyrosine phosphatases and heparanase. Pharmacological studies with RK-682 demonstrated enhanced ATP-induced long-term potentiation using guinea-pig hippocampal slices. Investigation of the complex has also shown potent activity against HIV-1 protease.

References

1. RK-682, a potent inhibitor of tyrosine phosphatase, arrested the mammalian cell cycle progression at G1phase. Hamaguchi T. et al. *FEBS Lett.* **1995**, 372, 54.
2. Structure-based design of a selective heparanase inhibitor as an antimetastatic agent. Ishida K. et al. *Mol. Cancer. Ther.* **2004**, 3, 1069.
3. The mechanism of ATP-induced long-term potentiation involves extracellular phosphorylation of membrane proteins in guinea-pig hippocampal CA1 neurons. Fujii S. et al. *Neurosci. Lett.* **1995**, 187, 130.
4. 3-Alkanoyl-5-hydroxymethyl tetronic acid homologues and resistomycin: new inhibitors of HIV-1 protease. I. Fermentation, isolation and biological activity. Roggo B.E. *J. Antibiot.* **1994**, 47, 136.