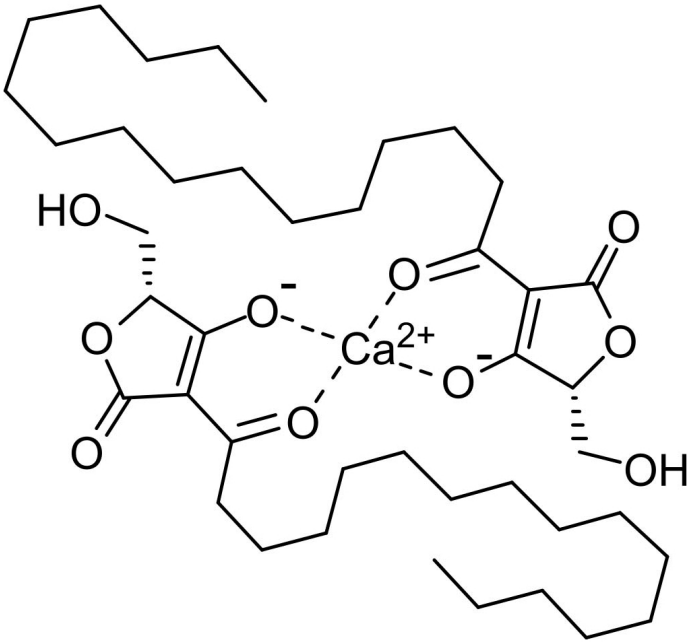
bioaustralis
fine chemicals

PRODUCT DATA SHEET

Code No.: BIA-R1082

RK-682

Pack sizes.: 0.5mg, 2.5mg



Synonyms:
TAN 1364B, CI 010

Specifications

CAS #	**: 332131-32-5**
Molecular Formula	**: C42H70CaO10**
Molecular Weight	**: 775.1**
Source	**: -**
Appearance	**: White Solid**
Purity	**: >95% by HPLC**
Long Term Storage	**: -20°C**
Solubility	**: Soluble in ethanol, methanol, DMF or DMSO. Poor water solubility.**

Application Notes

RK-682 is a dimeric calcium complex of the major analogue of a tetronic acid complex isolated from Streptomyces. Although reported by researchers at RIKEN in 1995, subsequent synthesis in 2001 showed that RK-682 was in fact the calcium complex formed during silica chromatography. Confusion about the structure of RK-682 has lead to the monomeric sub-unit, TAN 1364B (3-hexadecanoyl-5-hydroxymethyltetronic acid) being mis-named as RK-682 by many suppliers. As either the dimer or monomer, RK-682 inhibits protein tyrosine phosphatases, phospoholipase A2, heparinase and HIV-1 protease. However, is unclear whether biological activity is due to the monomer (TAN 1364B) or dimeric complex (RK-682).

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.