bio-techne
TOCRIS

Print Date: Dec 2nd 2024

Certificate of Analysis

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Product Name: **Anisomycin** **Catalog No.: 1290** **Batch No.: 10**

CAS Number: 22862-76-6 EC Number: 245-269-7

IUPAC Name: (2*R*,3*S*,4*S*)-2-[(4-Methoxyphenyl)methyl]-3,4-pyrrolidinediol 3-acetate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_{19}NO_4$

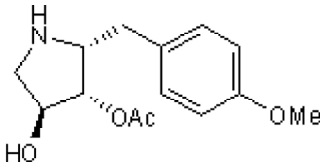
Batch Molecular Weight: 265.31

Physical Appearance: White solid

Solubility: ethanol to 50 mM
DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.5% purity

^{1}H NMR: consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.38	7.22	5.28
Found	63.24	7.28	5.29

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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IUPAC Name: (2*R*,3*S*,4*S*)-2-[(4-Methoxyphenyl)methyl]-3,4-pyrrolidinediol 3-acetate

Description:

Anisomycin is a protein synthesis inhibitor (blocks translation). Potent activator of stress-activated protein kinases (JNK/SAPK) and p38 MAP kinase. Acts as a potent signaling agonist to selectively elicit homologous desensitization of immediate early gene induction (c-fos, fosB, c-jun, junB and junD).

Physical and Chemical Properties:

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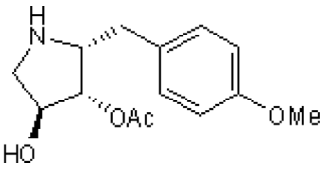
Batch Molecular Weight: 265.31

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 50 mM
DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Croons *et al* (2009) The protein synthesis inhibitor anisomycin induces macrophage apoptosis in rabbit atherosclerotic plaques through p38 mitogen-activated protein kinase. J.Pharmacol.Exp.Ther. ***329*** 856. PMID: 19286921.

Hazzalin *et al* (1998) Anisomycin selectively desensitizes signalling components involved in stress kinase activation and *fos* and *jun* induction. Mol.Cell.Biol. ***18*** 1844. PMID: 9528756.

Cano *et al* (1994) Anisomycin-activated protein kinases p45 and p55 but not mitogen-activated protein kinases ERK-1 and -2 are implicated in the induction of c-*fos* and c-*jun*. Mol.Cell.Biol. ***14*** 7352. PMID: 7935449.