

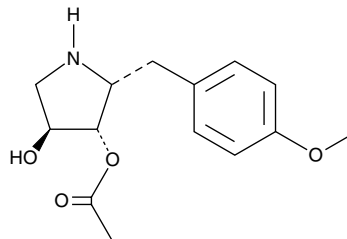
Product Information



Anisomycin

Item No. 11308

CAS Registry No.: 22862-76-6
Formal Name: 2-[(4-methoxyphenyl)methyl]-3-acetate-(2R,3S,4S)-3,4-pyrrolidinediol
Synonyms: Flagecidin, NSC 76712, Wuningmeisu C
MF: C₁₄H₁₉NO₄
FW: 265.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 225, 277, 284 nm



Laboratory Procedures

For long term storage, we suggest that anisomycin be stored as supplied at -20°C. It should be stable for at least two years.

Anisomycin is supplied as a crystalline solid. A stock solution may be made by dissolving the anisomycin in the solvent of choice. Anisomycin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of anisomycin in ethanol is approximately 1 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of anisomycin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of anisomycin in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Anisomycin is a pyrrolidine antibiotic produced by *S. griseolus* that inhibits protein and DNA synthesis.¹ It activates stress-activated protein kinase, MAP kinase, and other signal transduction pathways. At 30 mg/kg, anisomycin displays immunosuppressive activity superior to that of Cyclosporine A, blocking T cell proliferation in skin-transplanted mice.² Through a caspase-8-dependent pathway, anisomycin acts as a potent and specific anoikis sensitizer of malignant epithelial cells resistant to apoptosis upon detachment from the ECM, preventing distal tumor formation in a mouse model of prostate cancer metastases.³

References

1. Grollman, A.P. Inhibitors of protein biosynthesis. *J. Biol. Chem.* **242**(13), 3226-3233 (1967).
2. Xing, F., Yu, Z., Liu, J., *et al.* Anisomycin inhibits the behaviors of T cells and the allogeneic skin transplantation in mice. *J. Immunother.* **31**, 858-870 (2008).
3. Mawji, I.A., Simpson, C.D., Gronda, M., *et al.* A chemical screen identifies anisomycin as an anoikis sensitizer that functions by decreasing FLIP protein synthesis. *Cancer Res.* **67**, 8307-8315 (2007).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11308

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com