bio-techne
TOCRIS

Print Date: Jul 18th 2023

Certificate of Analysis

www.tocris.com

Product Name: **AM 80** **Catalog No.: 3507** **Batch No.: 3**

CAS Number: 94497-51-5

IUPAC Name: 4-[[(5,6,7,8-Tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)amino]carbonyl]benzoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{25}NO_3$.

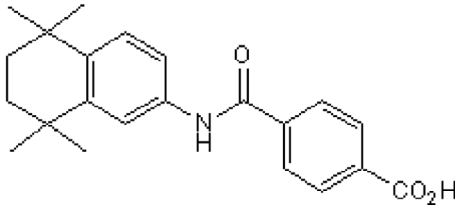
Batch Molecular Weight: 351.44

Physical Appearance: White solid

Solubility: DMSO to 50 mM
ethanol to 50 mM

Storage: Store at RT

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	75.19	7.17	3.99
Found	75.14	7.33	3.97

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Description:

AM 80 is a retinoic acid receptor α (RARα) agonist that induces differentiation (ED_{50} = 0.79 nM) and apoptosis of HL-60 cells in vitro. Exhibits antiproliferative effects against a variety of human tumor cells lines (mean values of 35, 40 and 60% growth inhibition at 0.1, 1 and 10 μM respectively) and displays anticancer activity against acute promyelocytic leukemia in vivo. AM 80 is a cell cycle activator in hiPSC-derived cardiomyocytes, and pretreatment with AM 80 promotes engraftment of cardiomyocytes in mice with heart damage.

Physical and Chemical Properties:

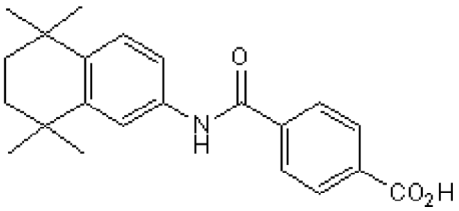
Batch Molecular Formula: $C_{22}H_{25}NO_3$.

Batch Molecular Weight: 351.44

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 50 mM
ethanol to 50 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:

Kasamoto *et al* (2023) Am80, a retinoic acid receptor agonist, activates the cardiomyocyte cell cycle and enhances engraftment in the heart. Stem Cell Reports ***S2213-6711*** 00235-7. PMID: 37451261.

Takenaga *et al* (2009) The effects of Am-80, a synthetic retinoid, on spinal cord injury-induced motor dysfunction in rats. Biol.Pharm.Bull. ***32*** 225. PMID: 19182380.

Jimi *et al* (2007) RARα is a regulatory factor for Am-80-induced cell growth inhibition of hematologic malignant cells. Int.J.Oncol. ***31*** 397. PMID: 17611697.