Print Date: Oct 12th 2022

Certificate of Analysis

www.tocris.com

Product Name: **BMS 453** **Catalog No.: 3409** **Batch No.: 3**

CAS Number: 166977-43-1

IUPAC Name: 4-[(1*E*)-2-(5,6-Dihydro-5,5-dimethyl-8-phenyl-2-naphthalenyl)ethenyl]-benzoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{24}O_2.½H_2O$

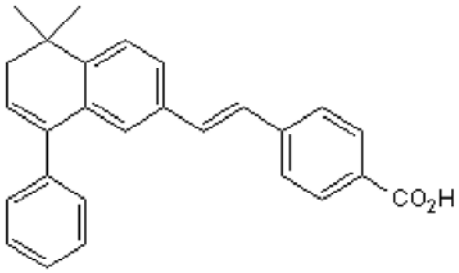
Batch Molecular Weight: 389.49

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.1 (Ethyl acetate:Petroleum ether [9:1])

HPLC: Shows 98.0% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	83.26	6.47	
Found	83.55	6.29	

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

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Description:

BMS 453 is a synthetic retinoid. Retinoic acid receptor β (RARβ) agonist in vivo; RARα and RARγ antagonist in vitro. Inhibits breast cell proliferation by inducing active transforming growth factor β (TGFβ) and causes G_1 arrest.

Physical and Chemical Properties:

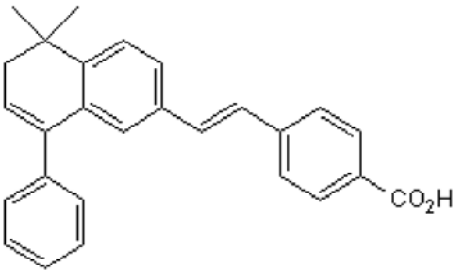
Batch Molecular Formula: $C_{27}H_{24}O_2.½H_2O$

Batch Molecular Weight: 389.49

Physical Appearance: Off-white solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

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. Our standard recommendations are:

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:

Monteiro *et al* (2009) Commitment of mouse embryonic stem cells to the adipocyte lineage requires retinoic acid receptor beta and active GSK3. Stem Cells Dev. ***18*** 457. PMID: 18690793.

Yang *et al* (2001) The retinoic acid receptor antagonist, BMS543, inhibits normal breast cell growth by inducing active TGFB and causing cell cycle arrest. Oncogene ***20*** 8025. PMID: 11753686.

Chen *et al* (1995) RAR-specific agonist/antagonists which dissociate transactivation and AP1 transrepression inhibit anchorage-independent cell proliferation. EMBO J. ***14*** 1187. PMID: 7720709.