

Certificate of Analysis

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Product Name: RITA

Catalog No.: 2443

Batch No.: 2

CAS Number: 213261-59-7

IUPAC Name: 5,5'-(2,5-Furandiyl)bis-2-thiophenemethanol

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_{12}O_3S_2 \cdot \frac{1}{4}H_2O$

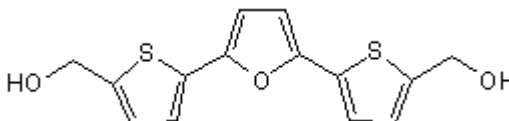
Batch Molecular Weight: 296.87

Physical Appearance: Light brown solid

Solubility: DMSO to 100 mM
ethanol to 25 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: $R_f = 0.38$ (Chloroform:Methanol [95:5])

HPLC: Shows 98.5% purity

1H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:	Carbon	Hydrogen	Nitrogen
Theoretical	56.64	4.24	
Found	56.97	4.11	

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

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IUPAC Name: 5,5'-(2,5-Furandiyl)bis-2-thiophenemethanol

Description:

Anti-tumor agent that binds wild-type p53 ($K_d = 1.5$ nM) preventing p53-MDM2 (HDM2) interaction. Induces p53 accumulation and stimulates apoptosis in tumor cell lines expressing wild-type p53 in vitro and in vivo. Inhibits HPV-E6-mediated proteasomal degradation. Suppresses expression of cervical carcinoma HeLa xenografts in vivo.

Physical and Chemical Properties:

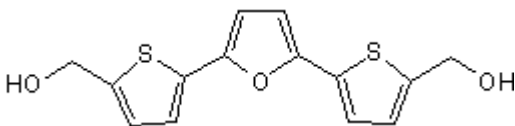
Batch Molecular Formula: $C_{14}H_{12}O_3S_2 \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 296.87

Physical Appearance: Light brown solid

Minimum Purity: >97%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 25 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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:

Rivera et al (1999) Selective toxicity of the tricyclic thiophene NSC 652287 in renal carcinoma cell lines: differential accumulation and metabolism. *Biochem.Pharmacol.* **57** 1283. PMID: 10230772.

Issaeva et al (2004) Small molecule RITA binds to p53, blocks p53-HDM-2 interaction and activates p53 function in tumours. *Nature Med.* **10** 1321.

Espinoza-Fonseca (2005) Targeting MDM2 by the small molecule RITA: towards the development of new multi-target drugs against cancer. *Theor.Biol.Med.Mod.* **2** 38.

Zhao et al (2010) Rescue of p53 function by small-molecule RITA in cervical carcinoma by blocking E6-mediated degradation. *Cancer Res.* **70** 3372. PMID: 20395210.

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