

## Certificate of Analysis

[www.tocris.com](http://www.tocris.com)

**Product Name:** Tanshinone IIA

**Catalog No.:** 4426

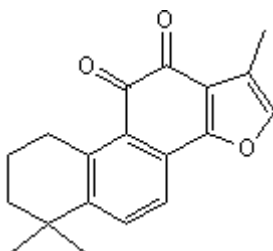
**Batch No.:** 1

CAS Number: 568-72-9

IUPAC Name: 6,7,8,9-Tetrahydro-1,6,6-trimethylphenanthro[1,2-*b*]furan-10,11-dione

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>19</sub>H<sub>18</sub>O<sub>3</sub>  
**Batch Molecular Weight:** 294.34  
**Physical Appearance:** Orange solid  
**Solubility:** DMSO to 5 mM with gentle warming  
**Storage:** Store at RT  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**HPLC:** Shows 98.6% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	77.53	6.16	
Found	77.45	6.26	

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

**Product Name:** Tanshinone IIA

**Catalog No.:** 4426

**Batch No.:** 1

CAS Number: 568-72-9

IUPAC Name: 6,7,8,9-Tetrahydro-1,6,6-trimethylphenanthro[1,2-b]furan-10,11-dione

**Description:**

Major tanshinone isolated from *Salvia miltiorrhiza*. Inhibits NF- $\kappa$ B and AP-1 DNA binding. Exhibits cytotoxic activity in a number of different cancer cells. Inhibits  $\beta$ -amyloid aggregation and protects PC12 cells from  $\beta$ -amyloid-induced apoptosis. Displays antioxidant and anti-inflammatory properties.

**Physical and Chemical Properties:**

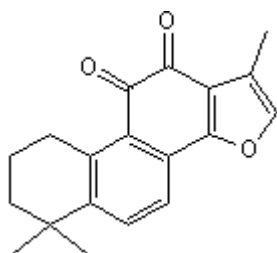
Batch Molecular Formula: C<sub>19</sub>H<sub>18</sub>O<sub>3</sub>

Batch Molecular Weight: 294.34

Physical Appearance: Orange solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**Wang et al (2007)** Growth inhibition and induction of apoptosis and differentiation of tanshinone IIA in human glioma cells. *J.Neurooncol.* **82** 11. PMID: 16955220.

**Jin et al (2008)** Tanshinone IIA from *Salvia miltiorrhiza* BUNGE inhibits human aortic smooth muscle cell migration and MMP-9 activity through AKT signaling pathway. *J.Cell Biochem.* **104** 15. PMID: 17979138.

**Lee et al (2008)** Anticancer effects of tanshinone I in human non-small cell lung cancer. *Mol.Cancer Ther.* **7** 3527. PMID: 19001436.

**Dong et al (2012)** Tanshinone IIA protects PC12 cells from  $\beta$ -amyloid(25-35)-induced apoptosis via PI3K/Akt signaling pathway. *Mol.Biol.Rep.* **39** 6495. PMID: 22314911.

**Storage:** Store at RT

**Solubility & Usage Info:**

DMSO to 5 mM with gentle warming

**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.

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

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956