TOCRIS
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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **Piperlongumine** **Catalog No.: 4396** **Batch No.: 1**

CAS Number: 20069-09-4

IUPAC Name: 5,6-Dihydro-1-[(2*E*)-1-oxo-3-(3,4,5-trimethoxyphenyl)-2-propen-1-yl]-2(1*H*)-pyridinone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{17}H_{19}NO_5$

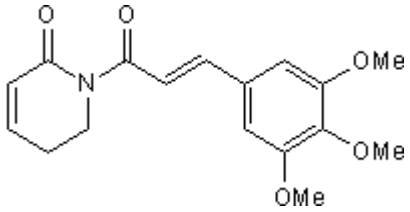
Batch Molecular Weight: 317.34

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 20 mM with gentle warming

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 124 - 126°C

HPLC: Shows 97.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.34	6.04	4.41
Found	64.29	5.86	4.42

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CAS Number: 20069-09-4

IUPAC Name: 5,6-Dihydro-1-[(2*E*)-1-oxo-3-(3,4,5-trimethoxyphenyl)-2-propen-1-yl]-2(1*H*)-pyridinone

Description:

Induces cell death and increases the level of reactive oxygen species (ROS) in cancer cells with both wild-type and normal p53. Also inhibits the growth of spontaneous malignant breast tumors in mice. Displays little effect on normal cells. Rapidly depletes androgen receptor expression in human prostate cancer cells via a ROS-dependent, proteasome-mediated mechanism.

Physical and Chemical Properties:

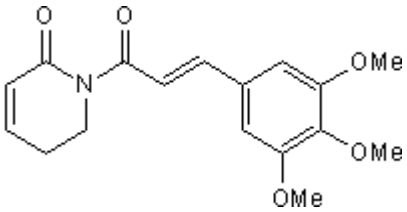
Batch Molecular Formula: $C_{17}H_{19}NO_5$

Batch Molecular Weight: 317.34

Physical Appearance: White 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 20 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.

References:

Raj *et al* (2011) Selective killing of cancer cells by a small molecule targeting the stress response to ROS. Nature ***475*** 231. PMID: 21753854.

Golovine *et al* (2012) Piperlongumine induces rapid depletion of the androgen receptor in human prostate cancer cells. Prostate [Epub ahead of print]. PMID: 22592999.

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