

Product Name: PYR 41

Catalog No.: 2978

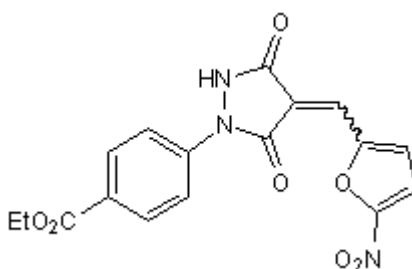
Batch No.: 2

CAS Number: 418805-02-4

IUPAC Name: 4-[4-[(5-Nitro-2-furanyl)methylene]-3,5-dioxo-1-pyrazolidinyl]benzoic acid ethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₃N₃O₇
Batch Molecular Weight: 371.3
Physical Appearance: Brown solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows >99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	54.99	3.53	11.32
Found	55.01	3.45	11.32

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

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Description:

Cell-permeable, irreversible ubiquitin-activating enzyme (E1) inhibitor ($IC_{50} < 10 \mu M$). Blocks ubiquitylation and prevents ubiquitin-mediated proteasomal degradation. Inhibits NF- κB activation, blocks degradation of p53, increases p21 levels and induces apoptosis in vitro. Also causes an increase in sumoylation of proteins.

Physical and Chemical Properties:

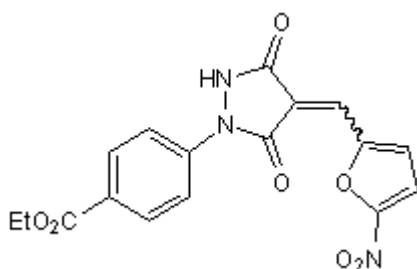
Batch Molecular Formula: $C_{17}H_{13}N_3O_7$

Batch Molecular Weight: 371.3

Physical Appearance: Brown solid

Minimum Purity: >98%

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

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:

Yang et al (2007) Inhibitors of ubiquitin-activating enzyme (E1), a new class of potential cancer therapeutics. *Cancer Res.* **67** 9472. PMID: 17909057.

Mi et al (2009) Cancer preventative isothiocyanates induce selective degradation of cellular α - and β -tubulins by proteasomes. *J.Biol.Chem.* **284** 17039. PMID: 19339240.

Brahemi et al (2010) Homology modelling of human E1 ubiquitin activating enzyme. *Lett.Drug Des.Discov.* **7** 57. PMID: 20396627.

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