

Product Name: Necrostatin-1

Catalog No.: 2324

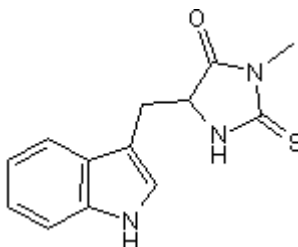
Batch No.: 2

CAS Number: 4311-88-0

IUPAC Name: 5-(1*H*-Indol-3-ylmethyl)-3-methyl-2-thioxo-4-imidazolidinone

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₃H₁₃N₃OS
Batch Molecular Weight: 259.33
Physical Appearance: Yellow solid
Solubility: DMSO to 30 mM
 ethanol to 15 mM with gentle warming
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	60.21	5.05	16.2
Found	60.39	5.07	16.21

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

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Description:

ATP-competitive, allosteric inhibitor of receptor-interacting protein kinase 1 (RIPK1) ($EC_{50} = 182$ nM). Blocks non-apoptotic cell death via inhibition of a specific cellular pathway, necroptosis, which leads to necrosis ($EC_{50} = 494$ nM). Reduces ischemic brain injury in a mouse model of stroke.

Physical and Chemical Properties:

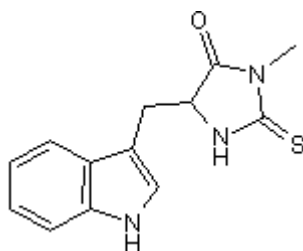
Batch Molecular Formula: $C_{13}H_{13}N_3OS$

Batch Molecular Weight: 259.33

Physical Appearance: Yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 30 mM

ethanol to 15 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:

Degterev et al (2005) Chemical inhibitor of nonapoptotic cell death with therapeutic potential for ischemic brain injury. *Nat.Chem.Biol.* **1** 112. PMID: 16408008.

Degterev et al (2008) Identification of RIP1 kinase as a specific cellular target of necrostatins. *Nat.Chem.Biol.* **4** 313. PMID: 18408713.

Linkermann et al (2012) Rip1 (receptor-interacting protein kinase 1) mediates necroptosis and contributes to renal ischemia/reperfusion injury. *81* 751. PMID: 22237751.

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