

## Certificate of Analysis

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**Product Name:** Necrostatin-1

**Catalog No.:** 2324

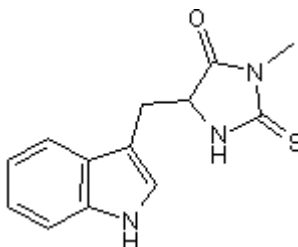
**Batch No.:** 2

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:** C<sub>13</sub>H<sub>13</sub>N<sub>3</sub>OS  
**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  
**<sup>1</sup>H 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:**

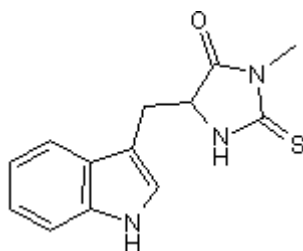
Batch Molecular Formula: C<sub>13</sub>H<sub>13</sub>N<sub>3</sub>OS

Batch Molecular Weight: 259.33

Physical Appearance: Yellow solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**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.

**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.

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