

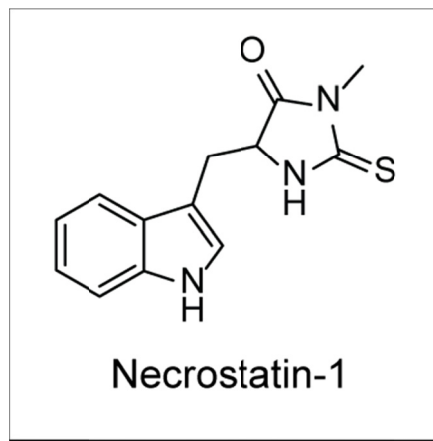


## Product Specification Sheet

**Product Name:** Necrostatin-1  
**Catalog Number:** C6221-5 (powder)  
C6221-5s (10mM in DMSO)  
**Package Size:** 5 mg

### Technical information:

**Chemical Formula:** C<sub>13</sub>H<sub>13</sub>N<sub>3</sub>OS  
**CAS #:** 4311-88-0  
**Molecular Weight:** 259.33  
**Purity:** >98%  
**Formulation:** Light Yellow solid  
**Solubility:** Soluble in DMSO up to 50 mM  
**Chemical Name:** 5-((1H-indol-3-yl)methyl)-3-methyl-2-thioxoimidazolidin-4-one  
**Storage:** Store solid powder at 4°C desiccated;  
Store DMSO solution at -20°C.



- Handling:**
- For C6221-5 (powder), add 1.928. mL of DMSO to make 10 mM solution.
  - For C6221-5s, before open the vial, centrifuge the vial at 500rpm x 1 min in a 50 mL conical tube to ensure full recovery of sample.

**Biological Activity:** Necrostatin-1 is a specific ATP-competitive allosteric inhibitor (EC<sub>50</sub> = 180 nM) of death domain receptor-associated adaptor kinase (RIP1)<sup>1</sup>. It selectively blocks a specific programmed cell death pathway, necroptosis, which leads to necrosis. While affecting this distinct cell death pathway, Necrostatin-1 does not present any perturbation of the Fas/TNFR triggered canonical apoptosis cascade. Necrostatin-1 inhibits the necrosis-induced RIP1 and RIP3 interactions in vitro<sup>2</sup> and reduces ischemic brain injury in a mouse model of stroke<sup>3</sup>.

- Reference:**
1. Degterev A., et al. Identification of RIP1 kinase as a specific cellular target of necrostatins. *Nat. Chem. Biol.* (2008), 4:313-321
  2. Sun L., et al. Mixed Lineage Kinase Domain-like Protein Mediates Necrosis Signaling Downstream of RIP3 Kinase. *Cell* (2012), 148:213-227.
  3. Degterev A., et al. Chemical inhibitor of nonapoptotic cell death with therapeutic potential for ischemic brain injury. *Nat. Chem. Biol.* (2005), 1:112-119

For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

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