

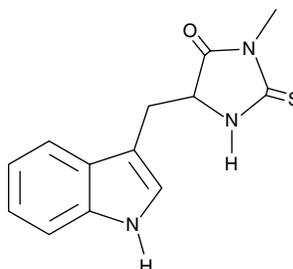
Product Information



Necrostatin-1

Item No. 11658

CAS Registry No.: 4311-88-0
Formal Name: 5-(1H-indol-3-ylmethyl)-3-methyl-2-thioxo-4-imidazolidinone
Synonym: Nec-1
MF: C₁₃H₁₃N₃OS
FW: 259.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 220, 266 nm



Laboratory Procedures

For long term storage, we suggest that necrostatin-1 (nec-1) be stored as supplied at -20°C. It should be stable for at least two years.

Nec-1 is supplied as a crystalline solid. A stock solution may be made by dissolving the nec-1 in the solvent of choice. Nec-1 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of nec-1 in these solvents is approximately 3, 14, and 20 mg/ml, respectively.

Nec-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, nec-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Nec-1 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Necroptosis is a regulated caspase-independent cell death mechanism that results in morphological features resembling necrosis. Serine/threonine kinase activity of the death domain receptor-associated molecule RIP1 is thought to be essential for Fas ligand-induced and tumor necrosis factor-α (TNF-α) induced necrosis.¹ Necrostatin-1 is an inhibitor of RIP1 kinase that prevents the death of TNF-α-treated FADD-deficient Jurkat cells with an EC₅₀ value of 490 nM.^{1,2} It has been used to investigate the pathological importance of necroptosis in ischemic brain injury and myocardial infarction.^{1,2}

References

1. Teng, X., Degtarev, A., Jagtap, P., *et al.* Structure-activity relationship study of novel necroptosis inhibitors. *Bioorg. Med. Chem. Lett.* **15**, 5039-5044 (2005).
2. Degtarev, A., Hitomi, J., Germscheid, M., *et al.* Identification of RIP1 kinase as a specific cellular target of necrostatins. *Nat. Chem. Biol.* **4**(5), 313-321 (2008).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11658

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com