

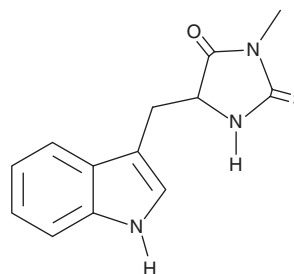
PRODUCT INFORMATION



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%
UV/Vis.: λ_{max}: 220, 266 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

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

Necrostatin-1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, necrostatin-1 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Necrostatin-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.

Description

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**(22), 5039-5044 (2005).
2. Degtarev, A., Hitomi, J., Gernscheid, M., et al. Identification of RIP1 kinase as a specific cellular target of necrostatins. *Nat. Chem. Biol.* **4**(5), 313-321 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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