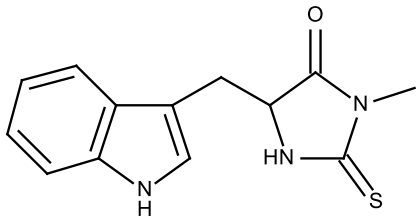
Catalog # 10-1162

Necrostatin 1

CAS# 4311-88-0

5-(1H-Indol-3-ylmethyl)-3-methyl-2-thioxo-4-Imidazolidinone

Lot # X102560



Necrostatin-1 is an inhibitor of necroptosis (non-apoptotic cell death pathway; EC_{50} = 494 nM).[1] It is an ATP-competitive death domain receptor-associated adaptor kinase (RIP1) inhibitor (EC_{50} = 182 nM).[2] It displays a protective effect in a mouse model of ischemic brain injury[1], inhibits myocardial cell death and reduces infarct size in various mouse heart models[3] and inhibits glutamate-induced oxytosis in HT-22 cells[4].

1) Degterev, et al. (2005*), Chemical inhibitor of nonapoptotic cell death with therapeutic potential for ischemic brain injury*. Nature Chem. Biol. **1** 112
2) Degterev *et al* (2008) *Identification of RIP1 kinase as a specific cellular target of necrostatins*. Nature Chem.Biol. ***4*** 313
3) Smith et.al. (2007), *Necrostatin: a potentially novel cardioprotective agent?,* Cardiovasc.Drugs Ther. **21** 227
4) Xu et.al. (2007**),** *Necrostatin-1 protects against glutamate-induced glutathione depletion and caspase-independent cell death in HT-22 cells,* J.Neurochem. **103** 2004

PHYSICAL DATA

Molecular Weight:	259.33
Molecular Formula:	$C_{13}H_{13}N_3OS$
Purity:	>98% (TLC: 10% Methanol/methylene chloride; Rf = 0.6) NMR: (Conforms)
Solubility:	DMSO (up to 20 mg/ml); ethanol (up to 5 mg/ml)
Physical Description:	Pale yellow solid
Storage and Stability:	Store as supplied at room temperature for up to 2 years from the date of purchase. Protect from exposure to moisture and air. Solutions in DMSO and ethanol may be stored at -20°C for up to 2 months.

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