

Product Data Sheet

Product Name: Necrostatin-1 Inactive Control

Cat. No.: GC40497

Chemical Properties

Cas. No. 64419-92-7

Chemical Name 5-(1H-indol-3-ylmethyl)-2-thioxo-4-imidazolidinone

SMILES O=C(C(N1)CC2=CNC3=CC=CC=C32)NC1=S

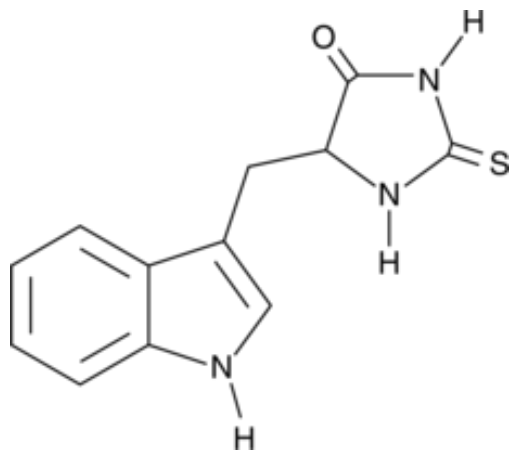
Formula C12H11N3OS M.Wt 245.3

Solubility 3mg/mL in ethanol, 14mg/mL in DMSO, 20mg/mL in DMF Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Necrostatin-1 Inactive Control (Nec-1i) is a demethylated variant of necrostatin-1, a RIP1 kinase inhibitor.[1] While both Nec-1 and Nec-1i inhibit the immune regulator indoleamine 2,3-dioxygenase, Nec1i is ~ 100-fold less effective than Nec-1 in inhibiting RIP1 kinase in vitro and 10-fold less potent than Nec-1 in a mouse necroptosis assay.[2] However, equally high doses of Nec-1 and Nec-1i are reported to inhibit TNF-induced systemic inflammatory response syndrome in vivo.[2] Nec-1i is often

Caution: Product has not been fully validated for medical applications. For research use only.

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used as an inactive control in studies using Nec-1 to exclude nonspecific off-target effects.

Reference:

- [1]. Degterev, A., Hitomi, J., Germerscheid, M., et al. Identification of RIP1 kinase as a specific cellular target of necrostatins. *Nature Chemical Biology* 4(5), 313-321 (2008).
- [2]. Takahashi, N., Duprez, L., Grootjans, S., et al. Necrostatin-1 analogues: Critical issues on the specificity, activity and in vivo use in experimental disease models. *Cell Death Dis.* 3, e437 (2012).

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