

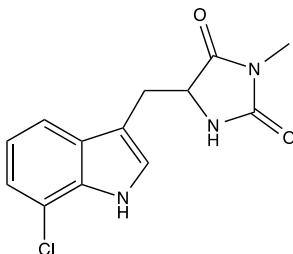
**Catalog #10-4544**

**7-Cl-O-Nec-1**

CAS# 852391-15-2

5-((7-Chloro-1H-indol-3-yl)methyl)-3-methylimidazolidine-2,4-dione; Nec-1s

Lot # FBA5271B



Necrostatin-1 analogue with superior potency ( $IC_{50} = 206\text{nM}$  vs  $494\text{nM}$ ), selectivity and metabolic stability in blocking RIP1.<sup>1,2</sup> 7-Cl-O-Nec-1 shows no off-target inhibition of indolamine-2,3-deoxygenase (IDO) in contrast to Necrostatin-1 (Nec-1).<sup>3,4</sup> 7-Cl-O-Nec-1 showed higher activity in inhibiting necroptosis in Jurkat cells than Necrostatin-1 ( $EC_{50} = 210\text{ nM}$  vs.  $EC_{50} = 490\text{ nM}$ ), no non-specific cytotoxicity at high concentrations ( $100\text{ }\mu\text{M}$ ) and reasonable pharmacokinetic characteristics when used in mice.<sup>2</sup> 7-Cl-O-Nec-1 is recommended for cellular and *in vivo* use over Necrostatin-1.<sup>5</sup>

- 1) Degterev *et al.* (2005) *Chemical inhibitor of nonapoptotic cell death with therapeutic potential for ischemic brain injury* Nat.Chem.Biol. **1** 112
- 2) Teng *et al.* (2005) *Structure-activity relationship of novel necroptosis inhibitors* Bioorg.Med.Chem.Lett. **15** 5039
- 3) Degterev *et al.* (2012) *Activity and specificity of necrostatin-1, small-molecule inhibitor of RIP1 kinase* Cell Death Differ. **20** 366
- 4) Takahashi *et al.* (2012) *Necrostatin-1 analogues: critical issues on the specificity, activity and in vivo use in experimental disease models* Cell Death Dis. **3** e437
- 5) Degterev *et al.* (2013) *Addendum: Chemical inhibitor of nonapoptotic cell death with therapeutic potential for ischemic brain injury* Nat.Chem.Biol. **9** 192

**PHYSICAL DATA**

Molecular Weight:	277.71
Molecular Formula:	$C_{13}H_{12}ClN_3O_2$
Purity:	>98% by TLC (5% Methanol/methylene chloride; $R_f = 0.55$ ) NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	Off-white to white
Storage and Stability:	Store as supplied at $-20^\circ\text{C}$ for up to 1 year from the date of purchase. Solutions in DMSO may be stored at $-20^\circ\text{C}$ for up to 3 months.

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