

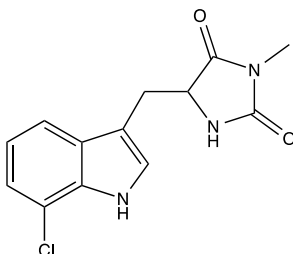
Catalog #10-4544

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 # FBA7194



Necrostatin-1 analogue with superior potency ($IC_{50} = 206\text{nM}$ vs 494nM), selectivity and metabolic stability in blocking RIP1.^{1,2} 7-Cl-O-Nec-1 shows no off-target inhibition of indolamine-2,3-deoxygenase (IDO) in contrast to Necrostatin-1 (Nec-1).^{3,4} 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.² 7-Cl-O-Nec-1 is recommended for cellular and *in vivo* use over Necrostatin-1.⁵

- 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; $R_f = 0.55$) and HPLC (Poroshell 120 C_{18} ; 80% $CH_3CN + 0.05\%$ TFA/ 20% $H_2O + 0.05\%$ TFA) NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	Off-white to white
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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