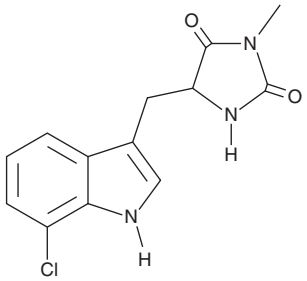
PRODUCT INFORMATION

(±)-Necrostatin-2

Item No. 20924

CAS Registry No.: 852391-15-2
Formal Name: 5-[(7-chloro-1H-indol-3-yl)methyl]-3-methyl-2,4-imidazolidinedione
Synonyms: 7-Cl-O-Nec-1, 7-Cl-O-Necrostatin-1, 7-chloro-O-Nec-1, Nec-1s, (±)-Nec-2, Necrostatin-1s
MF: $C_{13}H_{12}ClN_3O_2$
FW: 277.7
Purity: ≥98%
UV/Vis.: λ_{max}: 222 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(±)-Necrostatin-2 is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-necrostatin-2 in the solvent of choice, which should be purged with an inert gas. (±)-Necrostatin-2 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (±)-necrostatin-2 in these solvents is approximately 3, 20, and 14 mg/ml, respectively.

(±)-Necrostatin-2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (±)-necrostatin-2 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (±)-Necrostatin-2 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(±)-Necrostatin-2 is a racemic mixture that inhibits receptor-interacting protein kinase 1 (RIPK1) autophosphorylation *in vitro* in a dose-dependent manner.[1] Treatment with 6 mg/kg/day of (±)-necrostatin-2 prevents TNF-induced mortality in a murine model of systemic inflammatory response syndrome (SIRS). (±)-Necrostatin-2 decreases irradiation-induced lactate dehydrogenase (LDH) release and cell death in murine embryonic Cyt $c^{-/-}$ cells.[2] It also prevents angiotensin II-induced elastin degradation and aortic inflammation in a murine abdominal aortic aneurism (AAA) model at a dose of 1.6 mg/kg/day.

References

1. 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(11)**, e437 (2012).
2. Huang, Z., Epperly, M., Watkins, S.C., *et al.* Necrostatin-1 rescues mice from lethal irradiation. *Biochim. Biophys. Acta* **1862(4)**, 850-856 (2016).

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