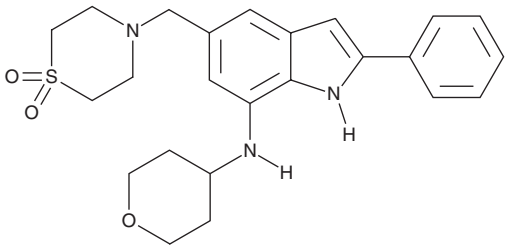
PRODUCT INFORMATION

NecroX-7

Item No. 42135

CAS Registry No.:	1120332-55-9
Formal Name:	5-[(1,1-dioxido-4-thiomorpholinyl)methyl]-2-phenyl-N-(tetrahydro-2H-pyran-4-yl)-1H-indol-7-amine
Synonyms:	LC28-0126, Necrosis Inhibitor 7
MF:	$C_{24}H_{29}N_3O_3S$
FW:	439.6
Purity:	≥98%
Supplied as:	A 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

NecroX-7 is supplied as a solid. A stock solution may be made by dissolving the necroX-7 in the solvent of choice, which should be purged with an inert gas. NecroX-7 is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in acetonitrile.

Description

NecroX-7 is a free radical scavenger and necrosis and ferroptosis inhibitor.[1-3] It scavenges DPPH (Item No. 14805) and ABTS (Item No. 27317) radicals in cell-free assays (EC_{50}s = 2.6 and 11.96 µM, respectively).[1] NecroX-7 inhibits necrosis induced by *tert*-butyl hydroperoxide (tBHP) in H9c2 cardiomyocytes and ferroptosis induced by erastin (Item No. 17754) in HT-1080 cells (IC_{50}s = 57 and 6 nM, respectively).[2,3] It reduces the activity of NADPH oxidase (NOX) by 53.3% in H9c2 lysates when used at a concentration of 25 µM.[2] NecroX-7 (25 µM) prevents acetaminophen-induced decreases in cell viability and increases in reactive oxygen species (ROS) and reactive nitrogen species (RNS) production in primary mouse hepatocytes.[1] *In vivo*, NecroX-7 (100 mg/kg) reduces doxorubicin-induced cardiomyopathy in rats.[2]

References

1. Park, J.-H., Seo, K.-S., Tadi, S., *et al.* An indole derivative protects against acetaminophen-induced liver injury by directly binding to *N*-acetyl-*p*-benzoquinone imine in mice. *Antioxid. Redox Signal.* **18(14)**, 1712-1722 (2013).
2. Park, J., Park, E., Ahn, B.-H., *et al.* NecroX-7 prevents oxidative stress-induced cardiomyopathy by inhibition of NADPH oxidase activity in rats. *Toxicol. Appl. Pharmacol.* **263(1)**, 1-6 (2012).
3. Lu, Y., Shen, Z., Xu, Y., *et al.* Discovery of new phenyltetrazolium derivatives as ferroptosis inhibitors for treating ischemic stroke: An example development from free radical scavengers. *J. Med. Chem.* **67(14)**, 11712-11731 (2024).

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