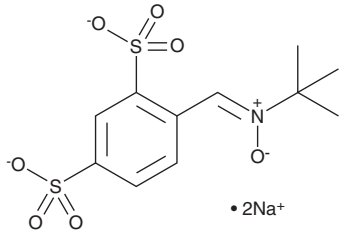
PRODUCT INFORMATION

NXY-059

Item No. 22109

CAS Registry No.:	168021-79-2
Formal Name:	4-[[(1,1-dimethylethyl)oxidoimino]methyl]-1,3-benzenedisulfonic acid, disodium salt
Synonyms:	CPI-22, Disufenton Sodium
MF:	$C_{11}H_{13}NO_7S_2$ • 2Na
FW:	381.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 203, 235, 305 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

NXY-059 is supplied as a crystalline solid. A stock solution may be made by dissolving the NXY-059 in the solvent of choice, which should be purged with an inert gas. NXY-059 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NXY-059 in ethanol is approximately 2 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of NXY-059 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of NXY-059 in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

NXY-059 is a nitrone free radical spin trap with neuroprotective properties.[1-3] It inhibits transport of tissue plasminogen activator (tPA) from the luminal to the abluminal compartment in an *in vitro* model of the blood-brain barrier (BBB) under ischemic conditions at a concentration of 250 µM.[4] NXY-059 (10 mg/kg per h) decreases infarct volume by 59% in a rat model of transient ischemia induced by occlusion of the middle cerebral artery (MCA).[2] It decreases functional disability in the hemiparetic arm of marmosets in the Hill-and-Valley staircase, two-tube choice, and six-tube search tests following MCA occlusion-induced ischemia when administered at a dose of 16 mg/kg per hour.[3]

References

1. Maples, K.R., Ma, F., and Zhang, Y.-K. *Free Radic Res.* **34(4)**, 417-426 (2001).
2. Sydserff, S.G., Borelli, A.R., Green, A.R., *et al. Br. J. Pharmacol.* **135(1)**, 103-112 (2002).
3. Marshall, J.W.B., Duffin, K.J., Green, R., *et al. Stroke* **32(1)**, 190-198 (2001).
4. Culot, M., Mysiorek, C., Renftel, M., *et al. Brain Res.* **1294**, 144-152 (2009).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM