

Catalog # 10-2471

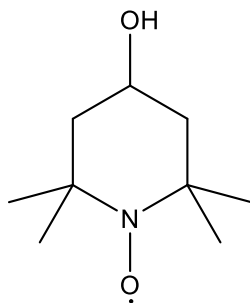
TEMPOL

CAS# 2226-96-2

4-Hydroxy-TEMPO

4-Hydroxy-2,2,6,6-tetramethylpiperidine-1-oxyl

Lot # X101851



Superoxide dismutase (SOD) mimetic. Displays protective effects in CNS¹ kidney² and radiation damage³. Inhibits superoxide anion-induced inflammatory pain in mice.⁴ Blunts diabetes-induced upregulation of NADPH oxidase and ER stress in a rat model of diabetic nephropathy.⁵ Cell permeable.

- 1) Lipman *et al.* (2006), *Neuroprotective effects of the stable nitroxide compound Tempol in 1-methyl-4-phenylpyridinium ion-induced neurotoxicity in the Nerve Growth Factor-differentiated model of pheochromocytoma PC12 cells*; Eur. J. Pharmacol., **549** 50
- 2) Guron *et al.* (2006), *Acute effects of the superoxide dismutase mimetic tempol on split kidney function in two-kidney one-clip hypertensive rats*; J. Hypertens., **24** 387
- 3) Samuni and Barenholz (1997), *Gamma-irradiation damage to liposomes differing in composition and their protection by nitroxides*; Free Radic. Biol. Med., **23** 972
- 4) Bernardy *et al.* (2017), *Tempol, a Superoxide Dismutase Mimetic Agent, Inhibits Superoxide Anion-Induced Inflammatory Pain in Mice*; Biomed. Res. Int., **2017** 9584819
- 5) De Blasio *et al.* (2017), *The superoxide dismutase mimetic tempol blunts diabetes-induced upregulation of NADPH oxidase and endoplasmic reticulum stress in a rat model of diabetic nephropathy*; Eur. J. Pharmacol., **807** 12

PHYSICAL DATA

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|------------------------|---|
| Molecular Weight: | 172.24 |
| Molecular Formula: | C ₉ H ₁₈ NO ₂ |
| Purity: | 98% by GC NMR: (Conforms) |
| Solubility: | DMSO (up to 25 mg/ml) or Ethanol (up to 17 mg/ml) |
| Physical Description: | Orange solid |
| Storage and Stability: | Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month. |

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