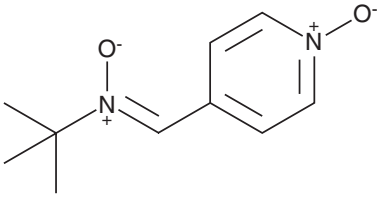
PRODUCT INFORMATION

POBN

Item No. 20623

CAS Registry No.: 66893-81-0
Formal Name: 2-methyl-N-[(1-oxido-4-pyridinyl)methylene]-2-propanamine-N-oxide
Synonym: 4-POBN
MF: $C_{10}H_{14}N_2O_2$
FW: 194.2
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 342 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

POBN is supplied as a crystalline solid. A stock solution may be made by dissolving the POBN in the solvent of choice, which should be purged with an inert gas. POBN is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of POBN in these solvents is approximately 30 mg/ml in ethanol and DMF and approximately 25 mg/ml in DMSO.

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 POBN can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of POBN in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

POBN is a cell permeable, hydrophilic spin trap that can be used to detect free radical adducts in *in vitro* studies.[1-4] It is a water soluble analog of N-*tert*-butyl-α-phenylnitrone (Item No. 15412).

References

1. Iimuro, Y., Bradford, B.U., Gao, W., *et al.* Detection of α-hydroxyethyl free radical adducts in the pancreas after chronic exposure to alcohol in the rat. *Mol. Pharmacol.* **50**, 656-661 (1996).
2. Samokyszyn, V.M., Freeman, J.P., Maddipati, K.R., *et al.* Peroxidase-catalyzed oxidation of pentachlorophenol. *Chem. Res. Toxicol.* **8**, 349-355 (1995).
3. Iwahashi, H., Deterding, L.J., Parker, C.E., *et al.* Identification of radical adducts formed in the reactions of unsaturated fatty acids with soybean lipoxygenase using continuous flow fast atom bombardment with tandem mass spectrometry. *Free Radic. Res.* **25**, 255-274 (1996).
4. Iwahashi, H., Albro, P.W., McGown, S.R., *et al.* Isolation and identification of α-(4-pyridyl-1-oxide)-N-tert-butylnitrone radical adducts formed by the decomposition of the hydroperoxides of linoleic acid, linolenic acid, and arachidonic acid by soybean lipoxygenase. *Arch. Biochem. Biophys.* **285**, 172-180 (1991).

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