

Product Data Sheet

Product Name: MitoPBN
Cat. No.: GC44202

Chemical Properties

Cas. No. 652968-37-1

SMILES CC(C)(C)/[N+](O-)=C/C(C=C1)=CC=C1OCCCC[P+](C2=CC=CC=C2)(C3=CC=CC=C3)C4=CC=CC=C4.[Br-]

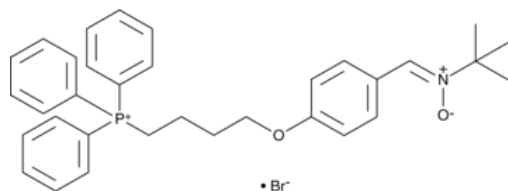
Formula C33H37NO2P•Br M.Wt 590.5

Solubility DMF: 25 mg/ml, DMF:PBS(pH7.2) (1:2): 0.33 mg/ml, DMSO: 1 mg/ml, Ethanol: 0.33 mg/ml
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

MitoPBN is a mitochondria-targeted antioxidant. It accumulates in the mitochondria following the generation of a mitochondrial membrane potential by succinate, an effect that is blocked by addition of the mitochondrial membrane potential uncoupler FCCP. MitoPBN inhibits superoxide activation of mitochondrial uncoupling protein 1 (UCP1), UCP2, and UCP3 when used at a concentration of 250 nM in vitro but does not react with superoxide. It traps hydroxyl (IC₅₀ = ~77 μM) and carbon-centered radicals and inhibits the initiation of lipid peroxidation in isolated bovine heart mitochondria.

Caution: Product has not been fully validated for medical applications. For research use only.

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