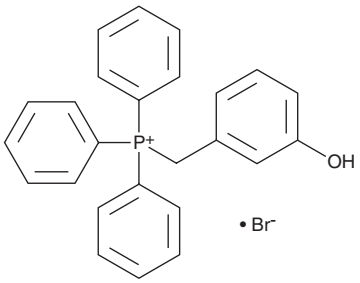
PRODUCT INFORMATION

MitoP

Item No. 17117

CAS Registry No.: 74597-01-6
Formal Name: [(3-hydroxyphenyl)methyl] triphenyl-phosphonium, monobromide
Synonym: MitoPhenol
MF: $C_{25}H_{22}OP \bullet Br$
FW: 449.3
Purity: ≥95%
UV/Vis.: λ_{max}: 276 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

MitoP is supplied as a crystalline solid. A stock solution may be made by dissolving the MitoP in the solvent of choice. MitoP is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of MitoP in ethanol is approximately 12 mg/ml and approximately 20 mg/ml in DMSO and DMF.

MitoP is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MitoP should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MitoP has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

MitoP is a phenol product produced by the reaction of H_2O_2 with the ratiometric mass spectrometry probe MitoB (Item No. 17116). MitoB contains a triphenylphosphonium cation component that drives its accumulation in mitochondria where its arylboronic moiety selectively reacts with H_2O_2 to produce MitoP.[1,2] Quantifying the MitoP/MitoB ratio by LC-MS/MS reflects the mitochondrial matrix H_2O_2 concentration.

References

1. Cochemé, H.M., Quin, C., McQuaker, S.J., *et al.* Measurement of H_2O_2 within living *Drosophila* during aging using a ratiometric mass spectrometry probe targeted to the mitochondrial matrix. *Cell Metab.* **13(3)**, 340-350 (2011).
2. Cochemé, H.M., Logan, A., Prime, T.A., *et al.* Using the mitochondria-targeted ratiometric mass spectrometry probe MitoB to measure H_2O_2 in living *Drosophila*. *Nat. Protoc.* **7(5)**, 946-958 (2012).

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