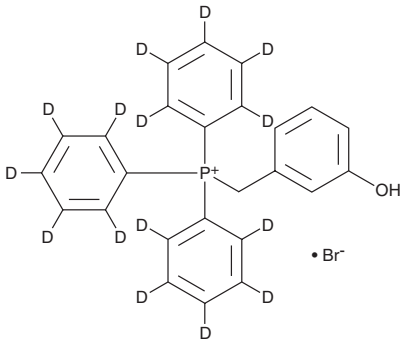
PRODUCT INFORMATION

MitoP-d_{15}

Item No. 19296

Formal Name:	[(3-hydroxyphenyl)methyl]triphenyl-d_5-phosphonium, monobromide
Synonym:	MitoPhenol-d_{15}
MF:	$C_{25}H_7D_{15}OP \bullet Br$
FW:	464.4
Chemical Purity:	≥95% (MitoP)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_{15}); ≤1% d_0
UV/Vis.:	λ_{max}: 295 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-d_{15} is intended for use as an internal standard for the quantification of MitoP (Item No. 17117) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

MitoP-d_{15} is supplied as a crystalline solid. A stock solution may be made by dissolving the MitoP-d_{15} in the solvent of choice, which should be purged with an inert gas. MitoP-d_{15} is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MitoP-d_{15} in ethanol is approximately 12 mg/ml and approximately 20 mg/ml in DMSO and DMF.

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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