PRODUCT INFORMATION

MitoB-d_{15}

**Item No. 17470**

**Formal Name:** [(3-boronophenyl)methyl]triphenyl-d_{15}-phosphonium, monobromide

**MF:** C_{25}H_{24}D_{15}BO_{2}P • Br

**FW:** 492.2

**Chemical Purity:** ≥95% (MitoB)

**Deuterium Incorporation:** ≥99% deuterated forms (d_{1}-d_{15}); ≤1% d_{0}

**UV/Vis.:** λ_{max}: 267 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥2 years

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

**Laboratory Procedures**

MitoB-d_{15} contains 15 deuterium atoms located on the triphenyl group. It is intended for use as an internal standard for the quantification of MitoB (Item No. 17116) 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).

MitoB-d_{15} is supplied as a crystalline solid. A stock solution may be made by dissolving the MitoB-d_{15} in the solvent of choice. MitoB-d_{15} is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of MitoB-d_{15} in these solvents is approximately 0.5, 10, and 5 mg/ml, respectively.

**Description**

MitoB is a ratiometric mass spectrometry probe that can be used for assessing changes in H_{2}O_{2} within mitochondria in vivo. MitoB contains a triphenylphosphonium cation component that drives its accumulation in mitochondria where its arylboronic moiety selectively reacts with H_{2}O_{2} to produce a phenol product, MitoP (Item No. 17117). Quantifying the MitoP/MitoB ratio by LC-MS/MS reflects the mitochondrial matrix H_{2}O_{2} concentration.

**References**