

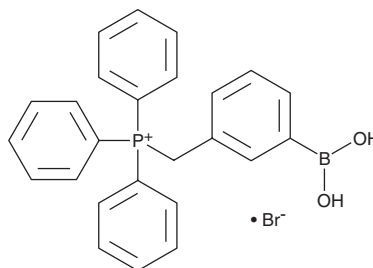
PRODUCT INFORMATION



MitoB

Item No. 17116

CAS Registry No.: 1247025-84-8
Formal Name: [(3-boronophenyl)methyl]triphenylphosphonium, monobromide
Synonym: MitoBoronic Acid
MF: $C_{25}H_{23}BO_2P \cdot Br$
FW: 477.1
Purity: $\geq 95\%$
Supplied as: A crystalline solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

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

MitoB is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MitoB should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MitoB 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

MitoB is a ratiometric mass spectrometry probe that can be used for assessing changes in H_2O_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_2O_2 to produce a phenol product, 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., 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).
2. 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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