

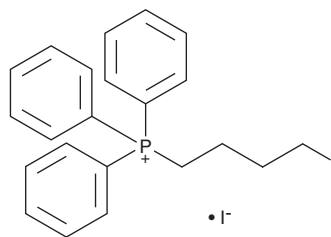
PRODUCT INFORMATION



IBTP (iodide)

Item No. 18802

CAS Registry No.: 159085-21-9
Formal Name: (4-iodobutyl)triphenyl-phosphonium, monoiodide
MF: $C_{22}H_{23}IP \cdot I$
FW: 572.2
Purity: $\geq 98\%$
Supplied as: A solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



Special Conditions: Light sensitive, store in dark in desiccating conditions

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

Laboratory Procedures

IBTP (iodide) is supplied as a solid. A stock solution may be made by dissolving the IBTP (iodide) in the solvent of choice, which should be purged with an inert gas. IBTP (iodide) is soluble in organic solvents such as ethanol and DMSO. The solubility of IBTP (iodide) in these solvents is approximately 50 and 100 mM, respectively.

Description

IBTP is a lipophilic cation that is accumulated in mitochondria and forms stable thioether adducts in a thiol-specific manner.¹ As a result, mitochondrial proteins that have changed thiol redox state following oxidative stress are selectively tagged with IBTP and can be separated by two-dimensional electrophoresis and isolated.¹ IBTP-tagged proteins can also be evaluated by immunoblotting using an antibody directed against the triphenylphosphonium moiety of the IBTP molecule.² IBTP has also been used as a mitochondria-targeted soft electrophile to inhibit mitochondrial oxidative phosphorylation.³

References

1. Lin, T.-K., Hughes, G., Muratovska, A., *et al.* Specific modification of mitochondrial protein thiols in response to oxidative stress: A proteomics approach. *J. Biol. Chem.* **277**(19), 17048-17056 (2002).
2. Venkatraman, A., Landar, A., Davis, A.J., *et al.* Oxidative modification of hepatic mitochondria protein thiols: Effect of chronic alcohol consumption. *Am. J. Physiol. Gastrointest. Liver Physiol.* **286**(4), G521-G527 (2004).
3. Vayalil, P. K., Oh, J.-Y., Zhou, F., *et al.* A novel class of mitochondria-targeted soft electrophiles modifies mitochondrial proteins and inhibits mitochondrial metabolism in breast cancer cells through redox mechanisms. *PLoS One* **10**(3), e0120460 (2015).

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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