



# SZABO SCANDIC

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## Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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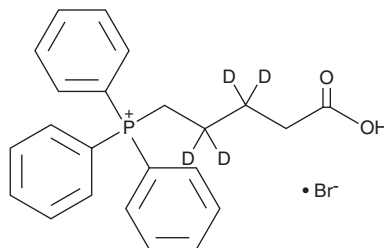
# PRODUCT INFORMATION



## (4-Carboxybutyl-d<sub>4</sub>)triphenylphosphonium (bromide)

Item No. 31254

**CAS Registry No.:** 42932-63-8  
**Formal Name:** (4-carboxybutyl-2,2,3,3-d<sub>4</sub>)triphenylphosphonium, monobromide  
**Synonyms:** TPP-d<sub>4</sub>, 5-Triphenylphosphoniovaleric Acid-d<sub>4</sub>  
**MF:** C<sub>23</sub>H<sub>20</sub>D<sub>4</sub>O<sub>2</sub>P • Br  
**FW:** 447.3  
**Chemical Purity:** ≥98% ((4-Carboxybutyl)triphenylphosphonium) Deuterium  
**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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

(4-Carboxybutyl-d<sub>4</sub>)triphenylphosphonium (bromide) is intended for use as an internal standard for the quantification of (4-carboxybutyl)triphenylphosphonium 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).

(4-Carboxybutyl-d<sub>4</sub>)triphenylphosphonium (bromide) is supplied as a solid. A stock solution may be made by dissolving the (4-carboxybutyl-d<sub>4</sub>)triphenylphosphonium (bromide) in the solvent of choice, which should be purged with an inert gas. (4-Carboxybutyl-d<sub>4</sub>)triphenylphosphonium (bromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (4-carboxybutyl-d<sub>4</sub>)triphenylphosphonium (bromide) in ethanol is approximately 1 mg/ml and approximately 5 mg/ml in DMSO and DMF.

### Description

(4-Carboxybutyl)triphenylphosphonium is a Wittig reagent.<sup>1</sup> It has been used in the synthesis of prostaglandin F<sub>2α</sub> (PGF<sub>2α</sub>; Item No. 16010) and the monounsaturated fatty acid 7-methyl-6-octadecenoic acid.<sup>1,2</sup> (4-Carboxybutyl)triphenylphosphonium has also been used to enhance mitochondrial localization of albumin nanoparticles loaded with the anticancer agent docetaxel (Item No. 11637).<sup>3</sup>

### References

1. Stork, G., Sher, P.M., and Chen, H.-L. Radical cyclization-trapping in the synthesis of natural products. A simple, stereocontrolled route to prostaglandin F<sub>2α</sub>. *J. Am. Chem. Soc.* **108**(20), 6384-6385 (1986).
2. Carballeira, N.M. Recent developments in the total synthesis of bioactive marine fatty acids. *Studies in Natural Products Chemistry*. Atta-ur-Rahman, editor, 1<sup>st</sup> edition, Elsevier (2002).
3. Battogtokh, G., Gotov, O., Kang, J.H., et al. Triphenylphosphine-docetaxel conjugate-incorporated albumin nanoparticles for cancer treatment. *Nanomedicine (Lond.)* **13**(3), 325-338 (2018).

#### 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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