



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

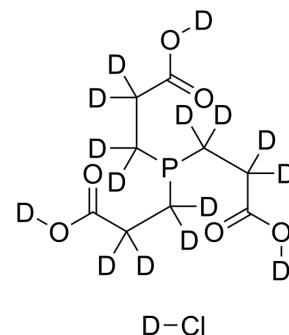
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

## TCEP-d16 hydrochloride

<b>Cat. No.:</b>	HY-W011500S
<b>CAS No.:</b>	1174025-33-2
<b>Molecular Formula:</b>	C <sub>9</sub> D <sub>16</sub> ClO <sub>6</sub> P
<b>Molecular Weight:</b>	302.75
<b>Target:</b>	Isotope-Labeled Compounds
<b>Pathway:</b>	Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	TCEP-d <sub>16</sub> (hydrochloride) is the deuterium labeled TCEP hydrochloride[1]. TCEP hydrochloride (Tris(2-carboxyethyl)phosphine hydrochloride) is a non-thiol reducing agent that is more stable and produces a faster S-S reductive reaction than other chemical reductants. TCEP hydrochloride is a trialkylphosphine, selectively reduces protein disulfides without altering the properties or interacting with thiol-directed agents in the reaction mixture. TCEP hydrochloride is also a commonly used reducing agent in the DNA/AuNP chemistry[2][3][4][5].
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.
- [2]. Dieguez-Acuña FJ, et al. Inhibition of NF-kappaB-DNA binding by mercuric ion: utility of the non-thiol reductant, tris(2-carboxyethyl)phosphine hydrochloride (TCEP), on detection of impaired NF-kappaB-DNA binding by thiol-directed agents. *Toxicol In Vitro*. 2000 Feb;14(1):7-16.
- [3]. Duchardt F, et al. A cell-penetrating peptide derived from human lactoferrin with conformation-dependent uptake efficiency. *J Biol Chem*. 2009 Dec 25284(52):36099-108.
- [4]. Sequeira MA, et al. Modulating amyloid fibrillation in a minimalist model peptide by intermolecular disulfide chemical reduction. *Phys Chem Chem Phys*. 2019 Jun 521(22):11916-11923.
- [5]. Wu R, et al. Effects of Small Molecules on DNA Adsorption by Gold Nanoparticles and a Case Study of Tris(2-carboxyethyl)phosphine (TCEP). *Langmuir*. 2019 Oct 1535(41):13461-13468.
- [6]. Han JC, Han GY. A procedure for quantitative determination of tris(2-carboxyethyl)phosphine, an odorless reducing agent more stable and effective than dithiothreitol. *Anal Biochem*. 1994220(1):5-10.

---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA