Product Data Sheet

Chemical Properties

**Product Name:** TCEP hydrochloride

**Cas No.:** 51805-45-9

**M.Wt:** 286.65

**Formula:** C9H16ClO6P

**Chemical Name:** 3,3',3''-phosphinetriyltripropanoic acid hydrochloride

**Canonical SMILES:** O=C(O)CCP(CCC(O)=O)CCC(O)=O.Cl

**Solubility:** Soluble in DMSO

**Storage:** Store at -20°C

**General tips:** For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

**Shopping Condition:**
- Evaluation sample solution: ship with blue ice
- All other available size: ship with RT, or blue ice upon request

Biological Activity

**Targets:** Others

**Pathways:** Reagents

**Description:**

Tris(2-carboxyethyl)phosphine hydrochloride (TCEP HCL) is a water soluble strong reducing agent that cleave disulfide bonds. It is a non-thiol and non-volatile solid. It can be utilized as catalyst for the reduction of sulfonyl chlorides, N-oxides, sulfoxides and azides.

In measuring DHA (Dehydroascorbic acid) content in multiple tissues and plasma of 6-weeks-old mice, 35mM TCEP HCL fully reduced DHA to AA (Ascorbic acid) after 2 hours on ice in a 5% solution of metaphosphoric acid containing 1mM ethylenediaminetetraacetic acid (EDTA) at pH
1.5. [1] In Aspergillus saitoi protease type XIII and porcine pepsin, TCEP can also be used in proteolysis and hydrogen/deuterium exchange. [2]

Reference:

Caution
FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.