**Bordetella pertussis toxin**

<table>
<thead>
<tr>
<th>Product No.</th>
<th>Antigen Type</th>
<th>Purity</th>
<th>Strain</th>
<th>Form</th>
<th>Typical Concentration</th>
<th>Vial Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>QPT-TNL-100</td>
<td>Native</td>
<td>Highly purified protein</td>
<td>NCTC 10739</td>
<td>Lyophilized</td>
<td></td>
<td>100ug</td>
</tr>
<tr>
<td>QPT-TNL-250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250ug</td>
</tr>
<tr>
<td>QPT-TNL-500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>500ug</td>
</tr>
</tbody>
</table>

**Typical Certificate of Analysis**

*Name:*  
*Bordetella pertussis* toxin (PT)  
*Product code:* QPT-TNL-250  
*Batch:* 3T13  
*Description:* Purified pertussis toxin (FHA-free) from *B. pertussis* strain NC10739/ACTC 9797  
*Purity:* >95% pure by SDS-PAGE  
*Amount:* 250µg  
*Presentation:* Lyophilized  
*Concentration:* 0.25mg/ml  
*Buffer:* Reconstitution of one vial with 1ml distilled water will give a solution containing 250ug of pertussis toxin, 0.05M sodium phosphate and 0.5M sodium chloride at pH 7.2.  
*Storage:* Store at 2-8°C.  
*Shipping Conditions:* Cold packs

*For in vitro investigational use only. Not for diagnostic or therapeutic applications.*

*NOTE: Material Safety Data Sheet on the following pages.*
**Bordetella pertussis toxin**

Material Safety Data Sheet

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### DESCRIPTION

Bordetella pertussis purified toxin, lyophilized.

Amount: Not more than 500ug/vial.

### COMPOSITION

Pertussis toxin from *Bordetella pertussis*. Sample is of biological origin and is presented as a white lyophilized solid in a glass vial. Each vial contains no more than 500µg.

Additional components present: 0.05M sodium phosphate buffer at pH7.2 and 0.5M sodium chloride.

### HEALTH HAZARDS

**Hazard Statements**

- Acute toxicity, Inhalation (Category 2)
- Acute toxicity, Dermal (Category 3)
- Acute toxicity, Oral (Category 4)

Toxic by inhalation, in contact with skin and if swallowed.

**Precautionary statement(s)**

- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wear protective gloves/protective clothing.
- Wear respiratory protection when dealing with powder.

### FIRST AID MEASURES

**Inhalation:**

Move person into fresh air. If not breathing give artificial respiration and seek medical attention immediately.

**Skin:**

Wash with copious amounts of soap and water. Consult a physician.

**Eyes:**

Rinse thoroughly at eyewash station for at least 15 minutes and seek medical attention.

**Ingestion:**

Never give anything by mouth to an unconscious person. Rinse mouth with water and seek medical attention immediately.

### FIRE FIGHTING MEASURES

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

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### ACCIDENTAL RELEASE MEASURES

**Personal precautions**

- Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so.

**Methods and materials for containment and cleaning up**

- Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal. Dispose of as biohazardous material.
**Bordetella pertussis toxin**

### HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Resuspend powder in safety cabinet. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Recommended storage temperature: 2 - 8 °C.

### EXPOSURE CONTROLS / PERSONAL PROTECTION

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN(EU).

**Hand protection**
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

**Eye protection**
Safety glasses

**Skin and body protection**
Laboratory coat

**Hygiene measures**
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

### PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
White powder, lyophilized

**Safety data**
- pH: pH 7.2 when rehydrated
- Melting point: no data available
- Boiling point: no data available
- Flash point: no data available
- Ignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Water solubility: soluble

### STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Avoid multiple freeze thaw cycles

**Materials to avoid**
Strong oxidizing agents

**Hazardous decomposition products**
None known
**Bordetella pertussis toxin**

### TOXICOLOGICAL INFORMATION

**Acute toxicity**
- LD50 intraperitoneal - mouse - 15 µg/kg

**Skin corrosion/irritation**
- No data available

**Serious eye damage/eye irritation**
- No data available

**Respiratory or skin sensitization**
- No data available

**Germ cell mutagenicity**
- No data available

**Carcinogenicity**
- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**
- No data available

**Aspiration hazard**
- No data available

**Potential health effects**
- Toxic if inhaled. May cause respiratory tract irritation.
- Harmful if swallowed, although low pH in gut can degrade the toxin, reducing its effects.
- Toxic if absorbed through skin. May cause skin irritation.
- May cause eye irritation.

**Signs and Symptoms of Exposure**
- Potentially neurotoxic.

**Additional Information**
- RTECS: XW5883750

### ECOLOGICAL INFORMATION

**Toxicity:** No data available

**Persistence and degradability:** Toxin degrades easily

**Bioaccumulative potential:** Low

**Mobility in soil:** No data available

**PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

### DISPOSAL CONSIDERATIONS

**Product**
- Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**
- Dispose of as unused product.
**Bordetella pertussis** toxin

### TRANSPORT INFORMATION

- UN Number: 3462
- Class: 6.1
- Packing group: I
- Proper shipping name: TOXINS EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.
  (Pertussis toxin from *Bordetella pertussis*)
- Shipped as Excepted Quantity transport class 1

### ADDITIONAL INFORMATION

If inactivated, this product is not considered hazardous by ingestion; pertussis toxin is degraded by the low pH in the gut and is not absorbed. Take special care when working in conjunction with hypodermic needles. If self-injection should occur, seek medical attention immediately.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. QED Bioscience Inc. shall not be held liable for any damage resulting from handling or from contact with the product.