# Pertussis Toxin from *Bordetella pertussis*

01-503  
25 µg

**Storage:** Shipped with dry-ice and store at -80°C.

**Applications:**

1. Studies on the signal transduction of the trimeric GTP binding proteins.
2. Therapeutic role in treating a number of diseases including hypertension, viral and autoimmune inhibitions.
   

**State:** 83 µg/ml (Lot.05) in 10% glycerol 10 mM phosphate buffer (pH 7.4), 137 mM NaCl

**Background:** Pertussis toxin (PT) is a protein-based AB5-type exotoxin produced by *Bordetella pertussis*. PT catalyzes the ADP-ribosylation of the α subunits of the heterotrimeric guanine nucleotide regulatory proteins Gi, Go, and Gt and prevents intracellular signal transduction involving the G proteins. PT consists of one molecule of each S1 (26 kDa), S2 (22 kDa), S3 (22 kDa), S5 (12 kDa) and two molecule of S4 (12 kDa). This product was highly purified (>90% pure) from *Bordetella pertussis* strain Tohama by the method of Skelton & Wong. Cytotoxicity of the PT was confirmed by morphological alteration of CHO cells after treatment with 0.1 ng/ml of PT (see the Figure below).

**Data Link:** [Swiss-Prot Pertussis toxin](http://www.uniprot.org/uniprot/Q96309)

**References:**


**Fig.1**  
*Assay: 0.1 ng/ml of PT in the culture medium of CHO cells at 37°C for 17 hr*

*PT (−), ×10  PT (0.1ng/ml), ×20*

Left: Control culture without PT  
Right: CHO cells treated with PT at 0.1 ng/ml

*Research use only, not for human use.  Related Product: 64-030 anti-Pertussis Toxin antibody*
Material Safety Data Sheet
Pertussis Toxin

Harzardous Ingradient
Pertussis toxin highly purified (>90% pure) from cultured medium of *Bordetella pertussis* strain Tohama
50~500 µg/ml depending on lot, in 50% glycerol, 10 mM phosphate buffer pH 7.3, 75 mM NaCl.

Health Hazard Data
The LD$_{50}$ of pertussis toxin in mice is 15~21 µg/kg by intraperitoneal injection.

Emergency Procedure
If the toxin is accidentally swallowed, induce vomiting. Since the toxin is unstable in acidic conditions, it will be degraded in stomach.

If skin pricking occurs accidentally, bleed and perform vigorous flushing of the area with large amounts of water. If injection occurs, seek a physician's advice immediately. Hyperimmune globulin is the only antidote.
However, persons immunized with Pertussis (whooping cough) vaccine will unlikely have long term adversary effects.

Handling
It should be handled carefully by persons with expertise in knowledge and techniques for the safe handling of bacterial toxins. Avoid mouth pipetting. Wear protective gloves on handling the toxin. Avoid contact with open wounds. Wash thoroughly any area of the body that makes contact with the toxin. It is recommended that persons who handle the toxin are immunized by pertussis vaccine.

Inactivation
The toxin can be inactivated by boiling for 30 min.