

**Product Specification Sheet**  
**Anti-B. pertussis Toxin Antibody**

□ Cat. # PTOX42-M

Monoclonal Anti-B. pertussis Toxin IgG unlabeled

**SIZE:** 100 ul

Pertussis toxin (PT) is a protein-based AB<sub>5</sub>-type exotoxin produced by the bacterium *Bordetella pertussis*, which causes whooping cough. PT is involved in the colonization of the respiratory tract and the establishment of infection. PT may have a therapeutic role in treating a number of common human ailments, including hypertension, viral inhibition, and autoimmune inhibition.

A large group of bacterial exotoxins are referred to as "A/B toxins", in essence because they are formed from two subunits. The "A" subunit possesses enzyme activity, and is transferred to the host cell following a conformational change in the membrane-bound transport "B" subunit. Pertussis toxin is an exotoxin with six subunits (named S1 through S5—each complex contains two copies of S4). Purified protein consists of five dissimilar subunits: S1 (28 kda), S2 (23 kda), S3 (22 kda), S4 (11.7 kda) and S5 (9.3 kda), in a molar ratio of 1:1:1:2:1. The subunits are arranged in A-B structure: the A component is enzymatically active and is formed from the S1 subunit, while the B component is the receptor-binding portion and is made up of subunits S2–S5. The subunits are encoded by *ptx* genes encoded on a large PT operon that also includes additional genes that encode Ptl proteins. Together, these proteins form the PT secretion complex.

*B. pertussis* expresses two forms of a rough-type lipooligosaccharide (LOS), which have been referred to as LOS A and LOS B. The two forms of LOS can be resolved as two distinct molecular weight species in silver stained sodium dodecyl sulfate-polyacrylamide gels of protease-treated *B. pertussis* cell lysates. The difference between the two forms of LOS has been shown to be due to three additional N-acetyl amino sugars in the core oligosaccharide moiety of LOS A that are not present in LOS B. The structure and biological activity of *B. pertussis* LOS are similar to those of LOSs of other gram-negative bacteria that contain lipid A and a core oligosaccharide moiety containing 2-keto-3-deoxyoctonate, exhibiting lethal toxicity in mice, pyrogenicity in rabbits, and mitogenicity in cell cultures.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Purified <i>B. pertussis</i> Toxin
<b>Ab Host/type</b>	Mouse, monoclonal IgG1 (#PTOX42-M) in PBS, pH 7.4, 0.1% BSA, and 0.05% azide at 0.5-1 mg/ml
<b>2-ab</b>	Goat Anti-mouse IgG-HRP conjugate Cat # 40120 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Form & Storage of Antibodies/Peptide Control**  
**Affinity pure IgG**

□ 100 ul □ solution      □ lyophilized powder  
Supplied in **Buffer:** PBS+0.1% BSA+0.05% azide,  
**Reconstitute**      **powder**      in      pbs

**Storage**

**Short-term:** unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C..

**Long-term:** at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for powder

**Recommended Usage**

Antibody is suitable for ELISA or IF. Antibody dilution should be tested for a given application. Recommended dilution is 1:500-1:5000 using 100-200 ng/well toxin protein.

Western blots Recommended dilution is 1:500-1:2000).

**Specificity & Cross-reactivity**

Antibodies are specific for *B. pertussis* Toxin in direct ELISA.

**References:** Caroff M (1990) *J. Bacteriol.* 172, 1121-1128; LeDur A (1980) *J. Bacteriol.* 143, 78-88; Li Z (1988) *Inf. Immunity Infect. Immunity* 56, 699-702; Pepler MS (1984) *Infect. Immunity* 43, 224-232

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog#      ProdDescription

PTOX15-N-50      Pertussis Toxin (islet activating protein, *B. pertussis*), purified

PTOX15-S Rabbit Anti-*B. pertussis* Toxin IgM negative control for ELISA,  
PTOX16-N-50      *Bordetella Pertussis* whole cell antigens extracts (Tohama 1)

PTOX16-S Rabbit Anti-*B. pertussis* Toxin IgM positive control for ELISA,  
PTOX17-S Rabbit Anti-*B. pertussis* Toxin IgG negative control for ELISA,

PTOX21-S G. Pig Anti-*B. pertussis* Toxin IgG negative control for ELISA,  
PTOX22-S G. Pig Anti-*B. pertussis* Toxin IgG positive control for ELISA,  
PTOX23-S G. Pig Anti-*B. pertussis* Toxin IgM negative control for ELISA,  
PTOX24-S G. Pig Anti-*B. pertussis* Toxin IgM positive control for ELISA,  
PTOX31-S Mouse Anti-*B. pertussis* Toxin IgG positive control for ELISA,  
PTOX32-S Mouse Anti-*B. pertussis* Toxin IgM negative control for ELISA,  
PTOX33-S Mouse Anti-*B. pertussis* Toxin IgG negative control for ELISA,  
PTOX34-S Mouse Anti-*B. pertussis* Toxin IgG positive control for ELISA,

PTOX35-N-10      Pertussis Toxin A promoter (*B. pertussis*), purified  
PTOX36-N-10      Pertussis Toxin B promoter (*B. pertussis*), purified

PTOX41-F Monoclonal Anti-*B. pertussis* LPS (Los-A) IgG-FITC Conjugate

PTOX41-M Monoclonal Anti-*B. pertussis/B. bronchiseptica* LPS (Los-A) IgG

PTOX42-M Monoclonal Anti-*B. pertussis* Toxin IgG unlabeled  
PTOX43-M Monoclonal Anti-*B. pertussis* Toxin subunit S1, IgG unlabeled  
PTOX44-M Monoclonal Anti-*B. pertussis* Toxin subunit S2, IgG unlabeled  
PTOX45-M Monoclonal Anti-*B. pertussis* Toxin subunit S3, IgG unlabeled

PTOX42-Mouse-Anti-Pertussin-Toxin-IgG      150818A

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