

## Anti-Pertussis Toxin antibody, rabbit serum

64-030 100 µl

**Storage:** Store at 4°C for short term. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.

**Immunogen:** Immunization was Initiated with toxoid and boosted with native toxin (BioAcademia 01-503)

**Form:** Whole rabbit antiserum added with 0.09% sodium azide (IgG purified product; #64-031)

### Applications:

1. Western blotting (1/2,000~1/10,000 dilution)
2. ELISA (1/10,000~1/20,000 dilution)
3. Dot blotting (1/2,000~1/10,000 dilution)
4. Immunoprecipitation (1/200~1/500 dilution)
5. Neutralising (Assay dependent)

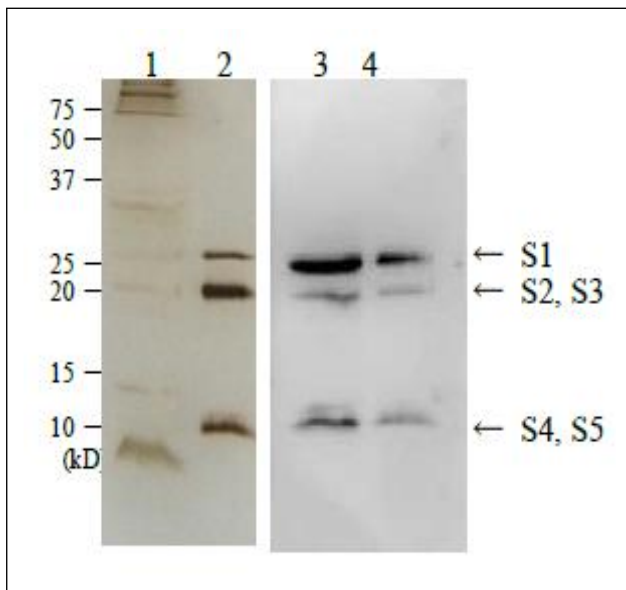
Other applications have not been tested.

**Background:** Pertussis toxin (PT) is a protein-based AB<sub>5</sub>-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<sup>1)</sup>. 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 subunit1](#), [subunit2](#), [subunit3](#), [subunit4](#), [subunit5](#)

**References:** Alouf JE & Popoff MR (Ed.) The comprehensive Sourcebook of Bacterial Protein Toxins 3rd Ed. Academic Press (2006)

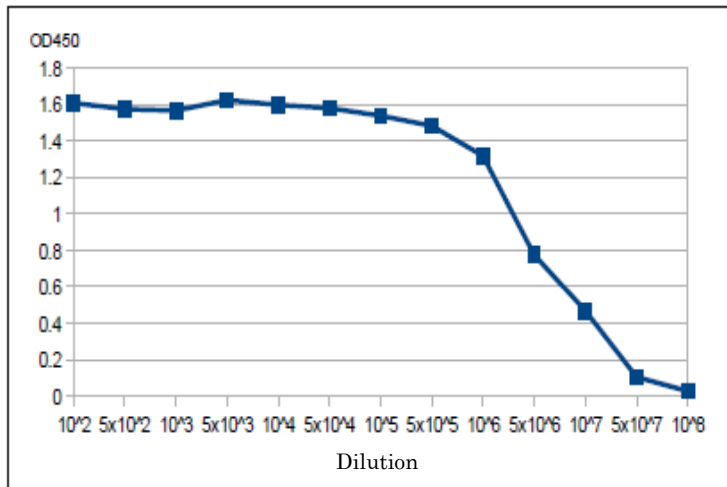
**Related Products:** #64-031 Anti-Pertussis Toxin antibody, rabbit polyclonal



**Fig.1. Detection of pertussis toxin in culture medium of *Bordetella pertussis* strain Tohama by Western blotting using anti-pertussis toxin antibody.**

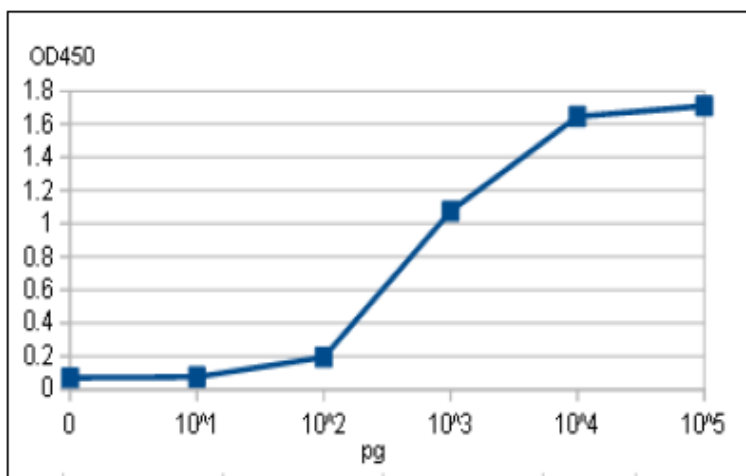
1. Culture medium of *Bordetella pertussis*. SDS-PAGE, silver-stained
2. Purified pertussis toxin (200 ng). SDS-PAGE, silver-stained
3. Western blot of culture medium of *Bordetella pertussis* as in 1.
4. Western blot of purified pertussis toxin (10 ng)

The toxin consists of five subunits as indicated by S1 to S5.



**Fig.2. Titration of antibody reactivity of anti-Pertussis antiserum by direct ELISA**

Plate was coated with 100  $\mu$ g of pertussis toxin per well and 100  $\mu$ l of the antiserum at the indicated dilution was added to each well and incubated. After washing, goat anti-rabbit-IgG conjugated with HRP was added as 2<sup>nd</sup> antibody. Color was developed with TMB as substrate.



**Fig.3. Titration of pertussis toxin by direct ELISA using anti-pertussis toxin antiserum**

ELISA plate is coated with indicated amounts of pertussis toxin per well. Antiserum was used at 1/12,500 dilution. ELISA was performed as in Fig.2. Dynamic range was 100 pg to 10 ng under these conditions.

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.