

## Pertussis Toxin from *Bordetella pertussis*

01-503      25 µg

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, G<sub>o</sub>, and G<sub>t</sub> and prevents intracellular signal transduction involving the  $\beta$ -proteins. PT consists of one molecule of each S1 (26 kDa), S2 (22 kDa), S3 (22 kDa), S5 (12 kDa) and two molecules 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 of 0.1 ng/ml of the PT (see the Figure below).

### Application

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

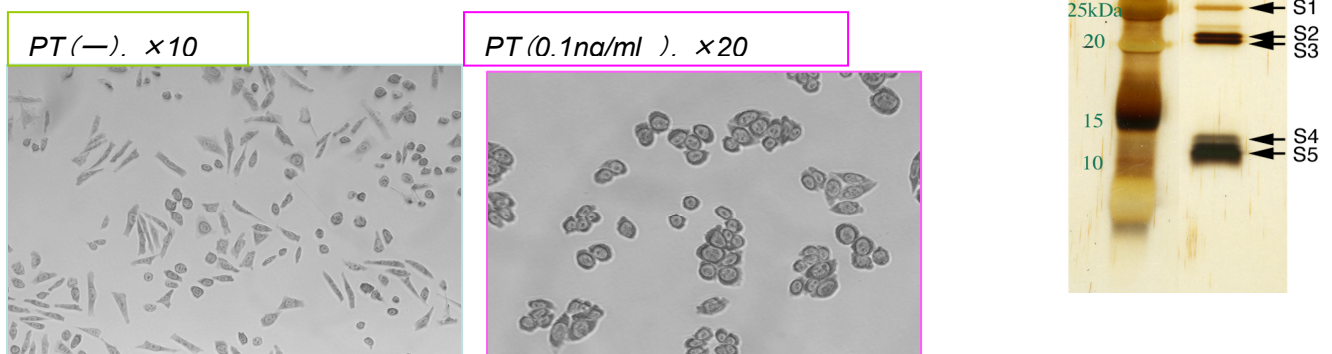
State: 65 µg/ml in 50% glycerol, 10 mM phosphate buffer pH 7.3, 75 mM NaCl

Storage: -20°C (long period); -70°C

### Reference

1. Skelton, SK and Wong KH, J. Clin. Microbiol. 28:1062-1065 (1990)
2. Alouf JE & Popoff MR (Ed.) The comprehensive Sourcebook of Bacterial Protein Toxins. 3rd Ed. Academic Press (2006)

Assay: PT 0.1 ng/ml, 37°C, 17 hr in the culture medium of CHO cells



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

\* Research use only, not to be used for humans

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