

AP55513PU-N**Polyclonal Antibody to Pst1 (N-term) - Aff - Purified****Alternate names:**

Protoplast secreted protein 1

Quantity:

0.1 mg

Concentration:

1.0 mg/ml

Background:

Protoplast secreted protein 1 (Pst1) is an anchored plasma membrane protein. Pst1 was previously identified as a protein secreted by yeast regenerating protoplasts, which suggests a role in cell wall construction (1). Pst1 is a protein with 444 amino acids and is attached to yeast cell wall via a glycosylphosphatidylinositol (GPI) anchor (2). Pst1 contains 15 potential N-linked glycosylation sites and is heavily glycosylated. It migrates at approximately 200 kDa on SDS-PAGE when produced in wild type *S. cerevisiae*. Our Pst1 protein was expressed in a genetically manipulated triple-mutant (TM) *S. cerevisiae* strain (Δ och1 Δ mnn1 Δ mnn4), which results in the production of sole Man8GlcNAc2 carbohydrate structures and Pst1 migration at approximately 100 kDa. When produced in the TM yeast, Pst1 can be recognized by several glycan-specific HIV-1 broadly neutralizing antibodies, including 2G12 and recently identified PGT antibodies (3). Among several heavily N-glycosylated TM yeast glycoproteins, Pst1 shows higher affinity for 2G12 and efficiently inhibits gp120 interactions with 2G12 and DC-SIGN, and it also blocks 2G12-mediated neutralization of HIV-1 pseudoviruses (4).

Uniprot ID:[Q12355](#)**NCBI:**[Q12355](#)**GeneID:**[851625](#)**Host / Isotype:**

Rabbit / IgG

Immunogen:

A synthetic peptide from the amino terminus of Yeast Pst1 (AP55513CP-N)

Format:**State:** Liquid purified Ig fraction**Purification:** Affinity chromatography purified via peptide column**Buffer System:** PBS containing 0.02% Sodium Azide as preservative**Applications:**

Pst1 antibody can be used for detection of Pst1 by **Western blot** and ELISA at 1 μ g/ml. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Molecular Weight:

49 kDa

Specificity:**Species:** Yeast

Other species not tested.

Add. Information:**Blocking peptide available:** AP55513CP-N**Storage:**

Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

Pardo M, Monteoliva L, Pla J, et al. Two-dimensional analysis of proteins secreted by *Saccharomyces cerevisiae* regenerating protoplasts: a novel approach to study the cell wall. *Yeast* 1999; 15:459-72.

Pardo M, Monteoliva L, Vázquez P, et al. PST1 and ECM33 encode two yeast cell surface GPI proteins important for cell wall integrity. *Microbiology* 2004; 150:4157-70.

Luallen RJ, Lin JQ, Fu H, et al. An Engineered *Saccharomyces cerevisiae* Strain Binds the Broadly Neutralizing Human Immunodeficiency Virus Type 1 Antibody 2G12 and Elicits Mannose-Specific gp120-Binding Antibodies. *J. Virol.* 2008; 82:6447-57.

Luallen RJ, Fu H, Agrawal-Gamse C, et al. A Yeast Glycoprotein Shows High-Affinity Binding to the Broadly Neutralizing Human Immunodeficiency Virus Antibody 2G12 and Inhibits gp120 Interactions with 2G12 and DC-SIGN. *J. Virol.* 2009; 83:4861-70.

Pictures:

Western blot analysis of TM yeast Pst1 protein (50 ng) with Pst1 antibody Cat.-No AP55513PU-N at 1 µg/ml.

