

Pst1 Antibody

Catalog # ASC10427

Product Information

Application	WB, E
Primary Accession	Q12355
Other Accession	Q12355 , 17380259
Reactivity	Yeast
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	45777
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Pst1 antibody can be used for detection of Pst1 by Western blot and ELISA at 1 µg/mL.

Additional Information

Gene ID	851625
Other Names	Pst1 Antibody: HPF2, HPF2, YDR055W, D4214, YD9609.09, Cell wall mannoprotein PST1, Haze protective factor 2, Protoplast secreted protein 1
Target/Specificity	PST1;
Reconstitution & Storage	Pst1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Pst1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PST1
Synonyms	HPF2
Function	Has a partially redundant function to ECM33 in cell wall integrity. May be involved in a repair mechanism activated in response to cell wall damage.
Cellular Location	Cell membrane; Lipid-anchor, GPI-anchor. Secreted, cell wall. Note=Identified as GPI-anchored plasma membrane protein (GPI-PMP) as well as non-covalently-linked, soluble protein of the cell wall. Secreted by regenerating protoplasts. In budded cells, concentrates at the surface of the buds

Background

Pst1 Antibody: 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. Pst1 is a protein with 444 amino acids and is attached to yeast cell wall via a glycosylphosphatidylinositol (GPI) anchor. 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 ($\Delta\text{och1 } \Delta\text{mnn1 } \Delta\text{mnn4}$), 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. 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.

References

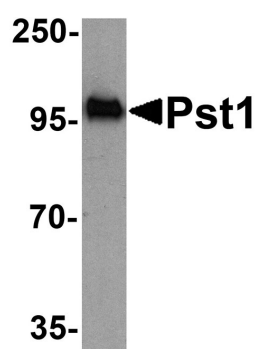
Pardo M, Monteoliva L, Pla J, et al. Two-dimensional analysis of proteins secreted by *Saccharomyces cerevisiae* regenerating protoplasts: a novel approach to study the cell wall. *Yeast* 1999; 15:459-72.

Pardo M, Monteoliva L, Vazquez 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.

Images



Western blot analysis of TM yeast Pst1 protein (50 ng) with Pst1 antibody at 1 µg/mL.

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