

**Goat Anti-PSPH Antibody**  
**Peptide-affinity purified goat antibody**  
**Catalog # AF1876a****Specification**

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**Goat Anti-PSPH Antibody - Product Information**

Application	WB, E
Primary Accession	<a href="#">P78330</a>
Other Accession	<a href="#">NP_004568</a> , <a href="#">5723</a> , <a href="#">100678 (mouse)</a> , <a href="#">304429 (rat)</a>
Reactivity	Human, Mouse
Predicted	Rat
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	25008

**Goat Anti-PSPH Antibody - Additional Information****Gene ID** 5723**Other Names**

Phosphoserine phosphatase, PSP, PSPase, 3.1.3.3, L-3-phosphoserine phosphatase, O-phosphoserine phosphohydrolase, PSPH

**Dilution**

WB~~1:1000

E~~N/A

**Format**

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Goat Anti-PSPH Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**Goat Anti-PSPH Antibody - Protein Information****Name** PSPH ([HGNC:9577](#))**Function**

Catalyzes the last irreversible step in the biosynthesis of L-serine from carbohydrates, the dephosphorylation of O-phospho-L-serine to L-serine (PubMed:<a href="http://www.uniprot.org/citations/12213811" target="\_blank">12213811</a>, PubMed:<a href="http://www.uniprot.org/citations/14673469" target="\_blank">14673469</a>, PubMed:<a href="http://www.uniprot.org/citations/15291819" target="\_blank">15291819</a>, PubMed:<a href="http://www.uniprot.org/citations/25080166" target="\_blank">25080166</a>, PubMed:<a href="http://www.uniprot.org/citations/9222972" target="\_blank">9222972</a>). L-serine can then be used in protein synthesis, to produce other amino acids, in nucleotide metabolism or in glutathione synthesis, or can be racemized to D-serine, a neuromodulator (PubMed:<a href="http://www.uniprot.org/citations/14673469" target="\_blank">14673469</a>). May also act on O-phospho-D-serine (Probable).

#### Cellular Location

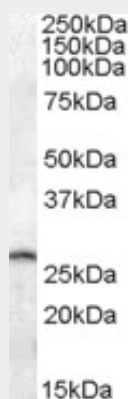
Cytoplasm, cytosol.

### Goat Anti-PSPH Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### Goat Anti-PSPH Antibody - Images



AF1876a (0.05 µg/ml) staining of Mouse Brain lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### Goat Anti-PSPH Antibody - Background

The protein encoded by this gene belongs to a subfamily of the phosphotransferases. This encoded enzyme is responsible for the third and last step in L-serine formation. It catalyzes magnesium-dependent hydrolysis of L-phosphoserine and is also involved in an exchange reaction between L-serine and L-phosphoserine. Deficiency of this protein is thought to be linked to Williams syndrome.

### Goat Anti-PSPH Antibody - References

Large-scale mapping of human protein-protein interactions by mass spectrometry. Ewing RM, et al. Mol Syst Biol, 2007. PMID 17353931.

The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Gerhard DS, et al. Genome Res, 2004 Oct. PMID 15489334.

How calcium inhibits the magnesium-dependent enzyme human phosphoserine phosphatase. Peeraer Y, et al. Eur J Biochem, 2004 Aug. PMID 15291819.

Complete sequencing and characterization of 21,243 full-length human cDNAs. Ota T, et al. Nat Genet, 2004 Jan. PMID 14702039.

Mutations responsible for 3-phosphoserine phosphatase deficiency. Veiga-da-Cunha M, et al. Eur J Hum Genet, 2004 Feb. PMID 14673469.