

## PSP Protein, Human (His)

<b>Cat. No.:</b>	HY-P71241
<b>Synonyms:</b>	Phosphoserine Phosphatase; PSP; PSPase; L-3-Phosphoserine Phosphatase; O-Phosphoserine Phosphohydrolase; PSPH
<b>Species:</b>	Human
<b>Source:</b>	E. coli
<b>Accession:</b>	P78330 (M1-E225)
<b>Gene ID:</b>	5723
<b>Molecular Weight:</b>	25-30 kDa

### PROPERTIES

<b>AA Sequence</b>	<pre> M V S H S E L R K L   F Y S A D A V C F D   V D S T V I R E E G   I D E L A K I C G V E D A V S E M T R R   A M G G A V P F K A   A L T E R L A L I Q   P S R E Q V Q R L I A E Q P P H L T P G   I R E L V S R L Q E   R N V Q V F L I S G   G F R S I V E H V A S K L N I P A T N V   F A N R L K F Y F N   G E Y A G F D E T Q   P T A E S G G K G K V I K L L K E K F H   F K K I I M I G D G   A T D M E A C P P A   D A F I G F G G N V I R Q Q V K D N A K   W Y I T D F V E L L   G E L E E           </pre>
<b>Biological Activity</b>	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
<b>Appearance</b>	Solution.
<b>Formulation</b>	Supplied as a 0.2 µm filtered solution of 20 mM Tris-HCl, 4 M Urea, 5 mM EDTA, pH 8.0.
<b>Endotoxin Level</b>	<1 EU/µg, determined by LAL method.
<b>Reconstitution</b>	N/A
<b>Storage &amp; Stability</b>	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
<b>Shipping</b>	Shipping with dry ice.

### DESCRIPTION

<b>Background</b>	Phosphoserine phosphatase (PSP) is responsible for catalyzing the final irreversible step in the biosynthesis of L-serine from carbohydrates, involving the dephosphorylation of O-phospho-L-serine to L-serine. This enzymatic activity is pivotal for various cellular processes, as L-serine serves as a precursor for protein synthesis, the generation of other amino acids, nucleotide metabolism, and glutathione synthesis. Additionally, L-serine can undergo racemization to form D-serine, which functions as a neuromodulator. PSP's role in regulating the availability of L-serine underscores its significance in diverse
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metabolic pathways and cellular functions. There is also a potential involvement in the dephosphorylation of O-phospho-D-serine, although this aspect remains to be confirmed.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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