Recombinant SERB protein (His tag)

Catalog Number	544789
Synonyms	PSP; PSPase; L-3-phosphoserine phosphatase; O-phosphoserine phosphohydrolase
Species	Human
Expression System	E. coli
Accession	P78330
Molecular Weight	Predictes a molecular mass of 26.66 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	1-225
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-225 aa (P78330) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Phosphoserine Phosphatase (PSP) Fragment (residues 1-225) is a high-quality, soluble protein product designed for structural and biochemical studies. This fragment, derived from the PSPH gene, retains key functional regions and is optimized for stability, making it ideal for investigating serine biosynthesis and related metabolic pathways. Phosphoserine phosphatase (PSP), encoded by the PSPH gene in humans, catalyzes the final irreversible step in L-serine biosynthesis by dephosphorylating O-phospho-L-serine to produce L-serine. This reaction is critical for generating L-serine, which serves as a precursor for protein synthesis, other amino acids, nucleotide metabolism, and glutathione production. Additionally, L-serine can be converted to D-serine, a key neuromodulator in the nervous system. PSP may also act on O-phospho-D-serine, highlighting its potential versatility. The enzyme is localized in the cytoplasm and cytosol, where it facilitates essential metabolic processes. The provided fragment (residues 1-225) encompasses a stable, soluble domain, enabling detailed analysis of PSP's catalytic and structural properties.