Recombinant PPAP protein (His tag)

Catalog Number	539800
Synonyms	PAP; 5'-nucleotidase; 5'-NT; Acid phosphatase 3; Ecto-5'-nucleotidase; Protein tyrosine phosphatase ACP3; Thiamine monophosphatase; TMPase
Species	Human
Expression System	E. coli
Accession	P15309
Molecular Weight	Predictes a molecular mass of 42.66 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	33-386
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 33-386 aa (P15309) 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 Prostatic Acid Phosphatase (PAP) Fragment (residues 33-386) is a high-quality, soluble protein designed for structural and biochemical studies. This fragment retains key functional domains, offering a stable and active unit for investigating PAP's diverse phosphatase activities and roles in cellular signaling and disease processes. Prostatic Acid Phosphatase (PAP), encoded by the ACP3 gene, is a multifunctional enzyme with several catalytic activities including acid phosphatase (EC 3.1.3.2), 5'-nucleotidase (EC 3.1.3.5), and protein tyrosine phosphatase (EC 3.1.3.48) functions. Under acidic conditions (pH 4-6), it dephosphorylates various substrates including phosphorylated proteins and lipids, notably inactivating lysophosphatidic acid in seminal plasma. Isoform 2 acts as a prostate cancer tumor suppressor by dephosphorylating ERBB2 and deactivating MAPK signaling, while also exhibiting ecto-5'-nucleotidase activity in pain regulation. The protein displays complex subcellular localization, with isoform 1 being secreted and isoform 2 found at the cell membrane, lysosome membrane, nucleus, and cytosol. Notably, a proteolytic fragment (PAPf39) forms amyloid fibrils in semen that enhance viral infection by capturing HIV virions and facilitating target cell attachment.