Recombinant PP1B protein (His tag)

Catalog Number	544759
Synonyms	PP-1B; PPP1CD
Species	Human
Expression System	E. coli
Accession	P62140
Molecular Weight	Predictes a molecular mass of 38.71 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	2-327
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 2-327 aa (P62140) 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 Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B), corresponding to residues 2-327, is a high-purity, stable fragment optimized for structural and biochemical studies. This product enables investigation of phosphatase activity and regulatory interactions in cellular signaling pathways. The full-length Serine/threonine-protein phosphatase PP1-beta (PPP1CB) is a crucial enzyme that forms specific holoenzymes with over 200 regulatory proteins to dephosphorylate numerous biological targets. It plays essential roles in cell division, glycogen metabolism, muscle contractility, protein synthesis, ionic conductance regulation, and long-term synaptic plasticity. PP1-beta is a core component of the PTW/PP1 phosphatase complex that controls chromatin structure and cell cycle progression during mitosis-to-interphase transition. It also regulates circadian rhythms by balancing phosphorylation of PER1/PER2 proteins and dephosphorylates FOXP3 in regulatory T-cells. Recently identified as part of the SHOC2-MRAS-PP1c holophosphatase complex, it specifically dephosphorylates inhibitory sites on RAF1, BRAF, and ARAF kinases to activate the MAPK pathway. The protein localizes to cytoplasm, nucleoplasm, and nucleolus, with high cellular mobility that allows relocalization through interaction with targeting subunits.