Recombinant PPM1E protein (His tag)

Catalog Number	540890
Synonyms	Ca(2+)/calmodulin-dependent protein kinase phosphatase N; CaMKP-N; CaMKP-nucleus; CaMKN; Partner of PIX 1; Partner of PIX-alpha; Partner of PIXA
Species	Human
Expression System	E. coli
Accession	Q8WY54
Molecular Weight	Predictes a molecular mass of 42.10 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	132-492
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 132-492 aa (Q8WY54) 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 Protein Phosphatase 1E (PPM1E) Fragment (aa 132-492) is a high-purity, functional protein that encompasses the complete PPM-type phosphatase domain. This fragment is optimized for studying the specific dephosphorylation activities and regulatory mechanisms of CaMKP-N, making it an essential tool for kinase-phosphatase interaction research and cellular signaling studies. Protein phosphatase 1E (PPM1E), also known as Ca^{2+}/calmodulin-dependent protein kinase phosphatase N (CaMKP-N), is a key regulatory enzyme that inactivates multifunctional CaM kinases including CAMK4 and CAMK2. It dephosphorylates and inactivates PAK and PRKAA2, playing a crucial role in actin cytoskeleton dynamics and morphological changes mediated by TNK2/CDC42 signaling pathways. The full-length protein exhibits dual subcellular localization, with the truncated form primarily cytoplasmic and the full-length form nuclear, reflecting its diverse regulatory functions across cellular compartments. This phosphatase's ability to modulate multiple signaling pathways makes it a significant target for understanding cellular regulation and signal transduction mechanisms.