Recombinant PTPRQ protein (His tag)

Catalog Number	539232
Synonyms	Receptor-type tyrosine-protein phosphatase Q; PTP-RQ; R-PTP-Q
Species	Human
Expression System	E. coli
Accession	Q9UMZ3
Molecular Weight	Predictes a molecular mass of 25.43 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	36-253
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 36-253 aa (Q9UMZ3) 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 Phosphatidylinositol Phosphatase PTPRQ Fragment (residues 36-253) is a high-purity protein designed for studying the Fibronectin type-III domains 1 and 2. This fragment supports research into lipid signaling pathways, adipogenesis, and auditory function by providing a targeted tool for domain-specific investigations. Phosphatidylinositol phosphatase PTPRQ (encoded by the PTPRQ gene) dephosphorylates phosphatidylinositol phosphates, with a preference for phosphatidylinositol 3,4,5-trisphosphate (PIP3), and can hydrolyze phosphate from the D3 and D5 positions of the inositol ring. It plays a critical role in adipogenesis of mesenchymal stem cells by regulating PIP3 levels and AKT1 phosphorylation, and is essential for hair bundle maturation in auditory function, potentially through modulation of phosphatidylinositol 4,5-bisphosphate (PIP2) levels. The protein localizes to stereocilia in cell projections, apical and basal cell membranes, and is observed in ring-like structures in stereocilium taper regions, highlighting its importance in cellular signaling and structural integrity.