Recombinant PEF1 protein (His tag)

Catalog Number	539152
Synonyms	PEF protein with a long N-terminal hydrophobic domain; Penta-EF hand domain-containing protein 1
Species	Human
Expression System	E. coli
Accession	Q9UBV8
Molecular Weight	Predictes a molecular mass of 21.88 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	110-284
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 110-284 aa (Q9UBV8) 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 Peflin (PEF1) Fragment (aa 110-284) is a high-purity protein encompassing the complete penta-EF-hand domain, designed for investigating calcium-dependent protein interactions and regulatory mechanisms in intracellular transport processes. Peflin, encoded by the PEF1 gene, is a calcium-binding adapter protein that bridges unrelated proteins or stabilizes weak protein-protein complexes in response to calcium signals. It plays a critical role in endoplasmic reticulum-Golgi transport by functioning with PDCD6 as a calcium-dependent adapter for the BCR(KLHL12) complex, regulating COPII coat size and promoting SEC31 monoubiquitination for collagen export during neural crest specification. While some evidence indicates Peflin and PDCD6 work cooperatively to facilitate PDCD6-SEC31 associations, other studies suggest Peflin may dissociate from PDCD6 upon calcium binding and act as a negative regulator of PDCD6 and ER-Golgi transport. Subcellularly, Peflin localizes to the cytoplasm, endoplasmic reticulum, and COPII-coated vesicle membranes as a peripheral membrane protein, with membrane association being calcium-dependent. This recombinant fragment provides the essential functional domains for studying these complex calcium-mediated interactions.