Recombinant PEX12 protein (His tag)

Catalog Number	533722
Synonyms	Peroxin-12
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q19189
Gene ID	181331
Molecular Weight	Predictes a molecular mass of 10.36 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	282-359
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 282-359 aa (Q19189) 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 Peroxisome assembly protein 12 (Peroxin-12) fragment (residues 282-359) from Caenorhabditis elegans, offering a stable and soluble unit ideal for structural studies and biochemical assays investigating peroxisomal protein transport mechanisms. Peroxisome assembly protein 12 (Peroxin-12), encoded by the prx-12 gene in Caenorhabditis elegans, is a critical component of the peroxisomal retrotranslocation channel. This multi-pass membrane protein, localized to the peroxisome membrane, functions alongside PEX2 and PEX10 to form a channel that mediates the export of the PEX5 receptor from peroxisomes to the cytosol, facilitating PEX5 recycling essential for peroxisome organization. Additionally, Peroxin-12 regulates PEX5 recycling by activating the E3 ubiquitin-protein ligase activity of PEX10; under compromised recycling conditions, it promotes PEX10-mediated polyubiquitination of PEX5, targeting it for degradation. The provided fragment (residues 282-359) represents a computationally selected stable and soluble region, enabling focused research on these key functional aspects.