Recombinant PEX5 protein (His tag)

Catalog Number	540010
Synonyms	PTS1 receptor; PTS1R; PTS1-BP; Peroxin-5; Peroxisomal C-terminal targeting signal import receptor; Peroxisome receptor 1
Species	Human
Expression System	E. coli
Accession	P50542
Molecular Weight	Predictes a molecular mass of 41.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	286-639
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 286-639 aa (P50542) 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	This recombinant protein product features a stable 354-amino acid fragment (residues 286-639) of the human Peroxisomal targeting signal 1 receptor (PEX5), a key mediator of peroxisomal protein import. This fragment is ideal for structural studies, biochemical assays, and functional investigations into peroxisomal transport mechanisms. The full-length Peroxisomal targeting signal 1 receptor (PEX5) is essential for peroxisomal biogenesis, functioning as the primary cytosolic receptor that recognizes and transports proteins containing a C-terminal PTS1-type peroxisomal targeting signal (e.g., SKL motif). It binds cargo proteins in the cytosol, facilitates their translocation into the peroxisome matrix via the PEX13-PEX14 docking complex, and undergoes a recycling process involving retrotranslocation to the cytosol for subsequent import cycles. Isoform 1 additionally supports the import of PTS2-containing proteins through interaction with PEX7. PEX5 dynamically cycles between the cytosol and peroxisome matrix, with its activity regulated by ubiquitination and AAA ATPase-mediated extraction, underscoring its critical role in peroxisomal function and cellular metabolism.