Recombinant PICAL protein (His tag)

Catalog Number	540265
Synonyms	Clathrin assembly lymphoid myeloid leukemia protein
Species	Human
Expression System	E. coli
Accession	Q13492
Molecular Weight	Predictes a molecular mass of 40.40 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 40 kDa band.

Product Information

Sequence Region	2-345
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 2-345 aa (Q13492) 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 PICALM (2-345) Fragment is a high-purity protein product encompassing the ENTH domain (residues 14-145) of Phosphatidylinositol-binding clathrin assembly protein. This fragment serves as an essential tool for investigating clathrin-mediated endocytosis, membrane curvature sensing, and SNARE protein trafficking mechanisms in cellular studies. PICALM (Clathrin assembly lymphoid myeloid leukemia protein) is a cytoplasmic adapter protein critical for clathrin-mediated endocytosis, facilitating internalization of cell receptors, synaptic transmission, and apoptotic cell removal. It recruits AP-2 and attaches clathrin triskelions to plasma membranes, driving clathrin-coated vesicle assembly while directly sensing and regulating membrane curvature. Additionally, PICALM mediates endocytosis of R-SNAREs (VAMP2, VAMP3, VAMP4, VAMP7, VAMP8), which is essential for autophagic precursor formation and maturation, influencing autophagy and turnover of substrates like MAPT/TAU and amyloid precursor protein fragments. The protein localizes to cell membranes, clathrin-coated pits, Golgi apparatus, clathrin-coated vesicles, and the nucleus, with nuclear targeting potentially mediated through interaction with PIMREG.