Recombinant SEC13 protein (His tag)

Catalog Number	544718
Synonyms	GATOR2 complex protein SEC13; SEC13-like protein 1; SEC13-related protein
Species	Human
Expression System	E. coli
Accession	P55735
Molecular Weight	Predictes a molecular mass of 37.07 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 38 kDa band.

Product Information

Sequence Region	2-322
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 2-322 aa (P55735) 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 SEC13 Protein Fragment (residues 2-322) is a high-quality, soluble protein designed for structural and functional studies. This fragment, derived from the SEC13 homolog involved in nuclear pore complex formation and mTORC1 signaling, offers a stable and well-folded unit ideal for biochemical assays, structural biology, and investigating its roles in vesicle trafficking and nutrient-sensing pathways. The full-length SEC13 protein in Homo sapiens is a multifunctional component of both the nuclear pore complex (NPC) and the COPII coat, playing critical roles in intracellular transport and signaling. It contributes to the biogenesis of COPII-coated vesicles at the endoplasmic reticulum, facilitating the exit of secreted proteins like adipsin. Additionally, SEC13 is part of the GATOR2 complex, where it acts as an activator of the amino acid-sensing branch of the mTORC1 pathway. By inhibiting the GATOR1 subcomplex, GATOR2 helps regulate mTORC1 in response to nutrient availability, with SEC13 essential for complex stability. The protein localizes to various membranes, including COPII-coated vesicles, endoplasmic reticulum, nuclear pore complexes, and lysosomes, underscoring its broad impact on cellular organization and metabolic regulation.