Recombinant SEC12 protein (His tag)

Catalog Number	541308
Synonyms	Prolactin regulatory element-binding protein
Species	Human
Expression System	E. coli
Accession	Q9HCU5
Molecular Weight	Predictes a molecular mass of 29.58 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	137-388
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 137-388 aa (Q9HCU5) 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 PREB (Guanine nucleotide-exchange factor SEC12) Fragment (aa 137-388) - A highly stable and soluble protein fragment ideal for structural studies and biochemical characterization of this key regulator of endoplasmic reticulum to Golgi vesicle transport. Guanine nucleotide-exchange factor SEC12, also known as Prolactin regulatory element-binding protein (PREB), functions as a guanine nucleotide exchange factor (GEF) that regulates the assembly of the coat protein complex II/COPII in endoplasmic reticulum (ER) to Golgi vesicle-mediated transport. It selectively activates SAR1A and SAR1B by promoting the exchange of GDP for GTP in these small GTPases. In their activated GTP-bound state, SAR1A and SAR1B insert into the endoplasmic reticulum membrane where they recruit the remainder of the COPII complex, which is responsible for both protein sorting and the deformation and budding of membranes into vesicles destined for the Golgi apparatus. Additionally, PREB was initially identified for its probable role in pituitary gene transcription regulation, where it binds to the prolactin gene promoter and appears to activate transcription. The protein localizes to the endoplasmic reticulum membrane as a single-pass membrane protein and concentrates at endoplasmic reticulum exit sites (ERES), also known as transitional endoplasmic reticulum (tER), with additional nuclear localization observed.