Recombinant NACAD protein (His tag)

Catalog Number	548650
Species	Human
Expression System	E. coli
Accession	O15069
Molecular Weight	Predictes a molecular mass of 9.90 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band.

Product Information

Sequence Region	1410-1483
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 1410-1483 aa (O15069) 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 NAC-alpha domain-containing protein 1 (NACAD) Fragment (aa 1410-1483) – a high-purity protein fragment encompassing the complete NAC-A/B domain, ideal for investigating its role in preventing mislocalization of non-secretory polypeptides and modulating ribosome-ER interactions. The full-length NAC-alpha domain-containing protein 1 (NACAD) in Homo sapiens plays a critical role in ensuring accurate protein localization by preventing inappropriate targeting of non-secretory polypeptides to the endoplasmic reticulum (ER). It binds to nascent polypeptide chains emerging from ribosomes, blocking their interaction with the signal recognition particle (SRP), which normally directs secretory peptides to the ER. Additionally, NACAD reduces the inherent affinity of ribosomes for ER membrane translocation sites (M sites), thereby safeguarding against mislocalization. This protein is localized in both the cytoplasm and nucleus, highlighting its broad functional relevance in cellular protein sorting and quality control mechanisms.