Recombinant ACD protein (His tag)

Catalog Number	545633
Synonyms	POT1 and TIN2-interacting protein
Species	Human
Expression System	E. coli
Accession	Q96AP0
Molecular Weight	Predictes a molecular mass of 22.32 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	1-190
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 1-190 aa (Q96AP0) 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 Adrenocortical dysplasia protein homolog (ACD), encompassing amino acids 1-190, is a high-purity fragment designed for structural and biochemical studies. This stable, soluble protein unit supports research into telomere regulation mechanisms, offering researchers a reliable tool for investigating the shelterin complex's role in chromosome end protection and telomerase recruitment. The full-length Adrenocortical dysplasia protein homolog (ACD) is a critical component of the shelterin complex (telosome), which regulates telomere length and protects chromosome ends from inappropriate DNA repair processing. ACD promotes POT1 binding to single-stranded telomeric DNA and modulates POT1's inhibitory effects on telomere elongation. The ACD-POT1 heterodimer enhances telomere elongation by recruiting telomerase to telomeres and increasing its processivity, playing a vital role in maintaining genomic stability. This protein is localized to the nucleus and specifically associates with telomeres on chromosomes, with potential implications in organogenesis. The provided fragment (residues 1-190) represents a computationally selected stable region suitable for investigating these fundamental biological processes.