Recombinant RFA2 protein (His tag)

Catalog Number	542146
Synonyms	RP-A p32; Replication factor A protein 2; RF-A protein 2; Replication protein A 34 kDa subunit; RP-A p34
Species	Human
Expression System	E. coli
Accession	P15927
Molecular Weight	Predictes a molecular mass of 15.87 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	45-171
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 45-171 aa (P15927) 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	This product is a recombinant fragment of the human Replication protein A 32 kDa subunit (RP-A p32), corresponding to amino acids 45-171. It is designed as a stable and soluble unit ideal for structural studies, biochemical assays, and investigating DNA replication and repair mechanisms. The full-length Replication protein A 32 kDa subunit, encoded by the RPA2 gene, is a critical component of the heterotrimeric RPA complex. It functions in DNA metabolism by binding and stabilizing single-stranded DNA intermediates during replication and in response to DNA damage. The RPA complex recruits and activates key proteins involved in DNA repair pathways, including nucleotide excision repair, base excision repair, and double-strand break repair via RAD51 and RAD52. It also plays a role in DNA damage checkpoint activation by recruiting ATRIP to activate ATR kinase, and contributes to telomere maintenance and replication fork restart. Located in the nucleus, particularly in PML bodies, the protein redistributes to discrete nuclear foci upon DNA damage in an ATR-dependent manner, underscoring its essential role in genomic stability.