Recombinant RFA3 protein (His tag)

Catalog Number	546932
Synonyms	RP-A p14; Replication factor A protein 3; RF-A protein 3
Species	Human
Expression System	E. coli
Accession	P35244
Molecular Weight	Predictes a molecular mass of 15.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	2-121
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 2-121 aa (P35244) 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 Replication Protein A 14 kDa Subunit (RP-A p14), corresponding to amino acids 2-121, is a high-purity fragment designed for structural and biochemical studies. This product captures a stable, soluble domain essential for DNA replication and repair mechanisms, offering researchers a reliable tool for investigating single-stranded DNA binding and protein interactions in genomic stability pathways. The full-length Replication Protein A 14 kDa Subunit (RPA3) is a critical component of the heterotrimeric RPA complex in humans, functioning as a key regulator in DNA metabolism. It binds and stabilizes single-stranded DNA intermediates during DNA replication and in response to DNA damage, preventing reannealing and facilitating the recruitment of repair proteins such as RAD51, XPA, and ATRIP. This complex is essential for activating DNA damage checkpoints, nucleotide excision repair, base excision repair, and telomere maintenance. RPA3 contributes to the polarity of DNA binding within the complex and may also participate in alternative RPA pathways that support DNA repair without promoting chromosomal replication. The protein is localized to the nucleus, underscoring its central role in preserving genomic integrity under stress conditions.