Recombinant MCM3 protein (His tag)

Catalog Number	539862
Synonyms	DNA polymerase alpha holoenzyme-associated protein P1; P1-MCM3; RLF subunit beta; p102
Species	Human
Expression System	E. coli
Accession	P25205
Molecular Weight	Predictes a molecular mass of 11.82 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	563-653
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 563-653 aa (P25205) 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 high-quality recombinant protein fragment of the human DNA replication licensing factor MCM3 (residues 563-653), designed for structural and biochemical studies. MCM3 is a critical component of the replicative helicase essential for DNA replication initiation and elongation, and this stable, soluble fragment offers researchers a reliable tool to investigate mechanisms of eukaryotic DNA replication. The full-length MCM3 protein functions as part of the MCM2-7 complex, which serves as the replicative helicase necessary for precisely regulated 'once per cell cycle' DNA replication in eukaryotic cells. It is a core component of the CDC45-MCM-GINS (CMG) helicase complex that unwinds DNA templates during replication and forms the foundation of the replisome. The protein contains multiple ATPase active sites that contribute differentially to helicase activity. MCM3 is localized to the nucleus and associates with chromatin prior to nuclear formation, detaching as DNA replication progresses. Its proper function is required for S phase entry and cell division, making it fundamental to cell proliferation and genome integrity.