Recombinant TEN1L protein (His tag)

Catalog Number	540652
Synonyms	Protein telomeric pathways with STN1 homolog; Telomere length regulation protein TEN1 homolog
Species	Human
Expression System	E. coli
Accession	Q86WV5
Molecular Weight	Predictes a molecular mass of 15.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	1-123
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 1-123 aa (Q86WV5) 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 CST complex subunit TEN1 (Protein telomeric pathways with STN1 homolog), encompassing amino acids 1-123, is a high-purity fragment designed for structural and biochemical studies. This stable, soluble unit facilitates research into telomere maintenance, DNA replication stress response, and genome stability mechanisms. The full-length TEN1 protein is a critical component of the CST complex, which functions as a specialized replication factor under conditions of replication stress or at natural barriers like telomeres. It binds single-stranded DNA with high affinity in a sequence-independent manner and plays multiple roles in telomere biology: it inhibits telomerase to regulate telomere length homeostasis, participates in fill-in synthesis of the telomeric C-strand by recruiting DNA polymerase alpha, and aids in recovery from exogenous DNA damage by promoting the re-initiation of DNA replication. TEN1 localizes to the nucleus and specifically associates with telomeres, underscoring its importance in chromosomal integrity and cellular replication processes. The provided fragment (1-123) represents a computationally optimized region for experimental applications, enabling detailed investigation of these functions without the complexities of the full-length protein.