Recombinant THOC3 protein (His tag)

Catalog Number	543385
Synonyms	Tho3; TEX1 homolog; hTREX45
Species	Human
Expression System	E. coli
Accession	Q96J01
Molecular Weight	Predictes a molecular mass of 40.30 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	2-351
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 2-351 aa (Q96J01) 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 THO complex subunit 3 (Tho3/TEX1 homolog/hTREX45) fragment (amino acids 2-351) is a highly stable and soluble protein unit ideal for structural biology and biochemical studies. This fragment represents the complete functional domain of THOC3, a crucial component of the TREX complex involved in mRNA transcription, processing, and nuclear export. THOC3 is an essential nuclear protein that functions as a core component of the THO subcomplex within the TREX complex. This complex couples mRNA transcription, processing, and nuclear export, specifically associating with spliced mRNA to facilitate efficient export of polyadenylated RNA through the NXF1 pathway. The THOC1-THOC2-THOC3 core complex directly binds export factor NXF1-NXT1 and promotes DDX39B ATPase activity. THOC3 localizes to nuclear speckles and plays a critical role in viral pathogenesis, as the TREX complex is required for Kaposi's sarcoma-associated herpesvirus mRNA export and infectious virus production. The selected fragment (2-351) encompasses the complete functional domain, making it valuable for studying mRNA export mechanisms and viral-host interactions.