Recombinant ESCO1 protein (His tag)

Catalog Number	545129
Synonyms	CTF7 homolog 1; Establishment factor-like protein 1; EFO1; EFO1p; hEFO1; Establishment of cohesion 1 homolog 1; ECO1 homolog 1; ESO1 homolog 1
Species	Human
Expression System	E. coli
Accession	Q5FWF5
Molecular Weight	Predictes a molecular mass of 29.08 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	603-840
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 603-840 aa (Q5FWF5) 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 N-acetyltransferase ESCO1 fragment (amino acids 603-840) is a highly purified protein preparation ideal for investigating the molecular mechanisms of sister chromatid cohesion establishment. This 238-amino acid fragment has been computationally optimized for stability and solubility, making it an excellent tool for structural studies and biochemical assays. ESCO1 (Establishment of cohesion 1 homolog 1) is a crucial acetyltransferase enzyme essential for establishing sister chromatid cohesion during DNA replication. This nuclear protein ensures proper chromosome segregation by coupling cohesion establishment with DNA replication, specifically acetylating the cohesin component SMC3. ESCO1 localizes to the nucleus during interphase and associates with chromosomes during mitosis, playing a fundamental role in maintaining genomic stability. The full-length protein's activity is restricted to S phase, distinguishing it from structural cohesins and highlighting its specialized function in coordinating DNA replication with chromatid pairing.