Recombinant YTHD1 protein (His tag)

Catalog Number	548167
Synonyms	DF1; Dermatomyositis associated with cancer putative autoantigen 1; DACA-1
Species	Human
Expression System	E. coli
Accession	Q9BYJ9
Molecular Weight	Predictes a molecular mass of 24.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 25 kDa band.

Product Information

Sequence Region	364-559
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 364-559 aa (Q9BYJ9) 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 YTHDF1 (YTH domain-containing family protein 1) fragment (residues 364-559) is a high-purity protein designed for studying m6A RNA binding and regulation. This fragment contains the complete YTH domain, making it an ideal tool for investigating mRNA stability, phase separation mechanisms, and epitranscriptomic functions in research applications. YTHDF1 is a human RNA-binding protein that specifically recognizes N6-methyladenosine (m6A) modifications in mRNAs, playing a critical role in regulating mRNA stability and processing. It promotes degradation of m6A-containing mRNAs through interaction with the CCR4-NOT complex and functions redundantly with other YTHDF paralogs in mediating mRNA degradation and cellular differentiation. YTHDF1 also facilitates phase separation when binding to polymethylated mRNAs, leading to formation of membraneless compartments such as P-bodies and stress granules. The protein is primarily localized in the cytoplasm, including P-bodies and stress granules, and has been implicated in learning and memory formation, axon guidance, and regulation of antigen cross-presentation in immune responses. These functions make it particularly relevant for neuroscience, immunology, and cancer research.