

Recombinant YTHDF1 protein

Catalog No: 31608, 31708

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.2 µg/µl

Source: Human

Buffer Contents: Recombinant YTHDF1 protein is supplied in 25 mM HEPES pH 7.5, 300 mM NaCl, 5% glycerol, 0.04% Triton X-100, 0.2 mM TCEP.

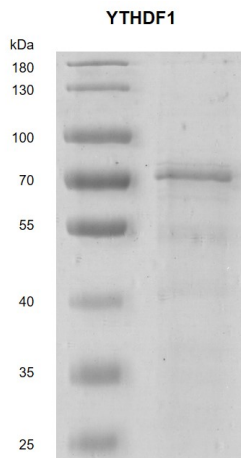
Background: N6-methylated adenine (m6A) is prevalently present in nearly all RNA types and can be found in all organisms from bacteria to humans. It preferentially appears around stop codons and within long internal exons in mammalian messenger RNAs. m6A plays an important role in the efficiency of mRNA splicing, processing, translation efficiency, editing and mRNA stability. m6A also takes place in other RNA molecules, such as primary miRNA (pri-miRNAs).

YTHDF1 (YT521-B homology domain family 1, also known as C20orf21, DACA-1) is a member of the YTH (YT521-B homology) superfamily containing YTH domain. Human YTH domain family proteins include three members, YTHDF1-3, which mainly localized in the cytoplasm. YTHDF proteins comprise a highly conserved single-stranded RNA-binding domain which specifically recognizes and binds m6A-containing RNAs. A important role of YTHDF1 is regulating mRNA translation efficiency. YTHDF1 promotes ribosome loading to m6A-containing mRNAs and interacts with translation initiation factors eIF3 (EIF3A or EIF3B) to facilitate translation initiation.

Protein Details: Recombinant YTHDF1 protein was expressed in a baculovirus expression system as the full length protein (accession number NP_060268.2) with an N-terminal FLAG-Tag. The molecular weight of YTHDF1 is 62.1 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

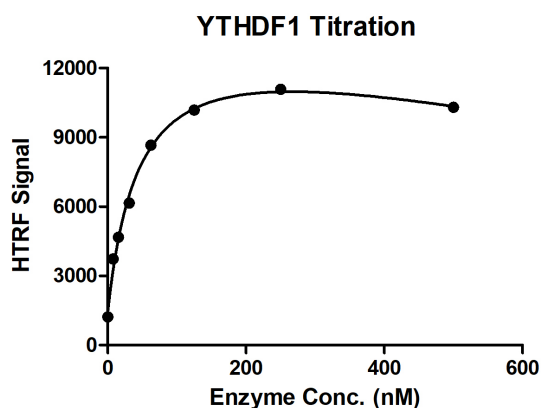


Recombinant YTHDF1 protein gel.

Recombinant YTHDF1 protein was run on an 10% SDS-PAGE gel and stained with Coomassie Blue.

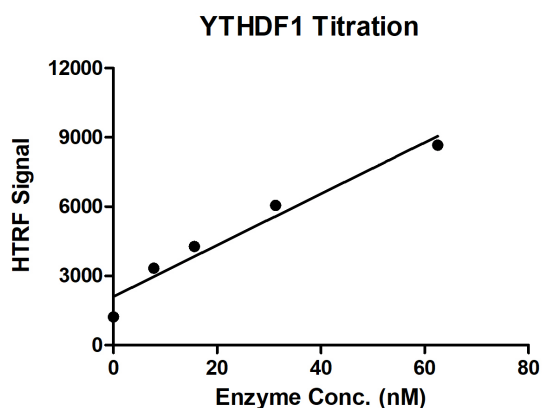
MW: 62.1 kDa

Purity: > 85%



HTRF Assay for Recombinant YTHDF1 protein activity.

3 μ M m6A ssDNA oligos (DNA sequence: 5'-GTTGG/ m6A/CTT -3') were incubated with YTHDF1 protein in binding buffer including 50 mM HEPES-NaOH pH 7.0, 0.1% BSA for 1 hour at room temperature. Anti-FLAG antibody was used to detect reaction products.



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