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# ALY Polyclonal Antibody

Catalog # AP68391

## Product Information

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| **Application** | WB, E |
| **Primary Accession** | Q86V81 |
| **Reactivity** | Human, Mouse, Rat |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 26888 |

## Additional Information

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| **Gene ID** | 10189 |
| **Other Names** | ALYREF; ALY; BEF; THOC4; THO complex subunit 4; Tho4; Ally of AML-1 and LEF-1; Aly/REF export factor; Transcriptional coactivator Aly/REF; bZIP-enhancing factor BEF |
| **Dilution** | WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications. E~~N/A |
| **Format** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide. |
| **Storage Conditions** | -20℃ |

## Protein Information

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| **Name** | ALYREF |
| **Synonyms** | ALY, BEF, THOC4 |
| **Function** | Functions as an mRNA export adapter; component of the transcription/export (TREX) complex which is thought to couple mRNA transcription, processing and nuclear export, and specifically associates with spliced mRNA and not with unspliced pre-mRNA (PubMed:15833825, PubMed:15998806, PubMed:17190602). TREX is recruited to spliced mRNAs by a transcription-independent mechanism, binds to mRNA upstream of the exon-junction complex (EJC) and is recruited in a splicing- and cap-dependent manner to a region near the 5' end of the mRNA where it functions in mRNA export to the cytoplasm via the TAP/NXF1 pathway (PubMed:15833825, PubMed:15998806, PubMed:17190602). Involved in the nuclear export of intronless mRNA; proposed to be recruited to intronless mRNA by ATP-bound DDX39B (PubMed:17984224). Plays a key role in mRNP recognition and mRNA packaging by bridging the mRNP-bound EJC and the TREX core complex (PubMed:37020021). TREX recruitment occurs via an interaction between |

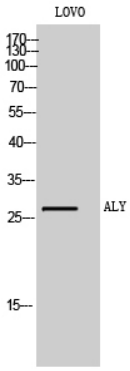
| | |
|---|---|
| | ALYREF/THOC4 and the cap- binding protein NCBP1 (PubMed:15833825, PubMed:15998806, PubMed:17190602, PubMed:37020021). Required for TREX complex assembly and for linking DDX39B to the cap-binding complex (CBC) (PubMed:15998806, PubMed:17984224, PubMed:37020021). Binds mRNA which is thought to be transferred to the NXF1-NXT1 heterodimer for export (TAP/NXF1 pathway) (PubMed:11675789, PubMed:11707413, PubMed:11979277, PubMed:15833825, PubMed:15998806, PubMed:17190602, PubMed:18364396, PubMed:22144908, PubMed:22893130, PubMed:23222130, PubMed:25662211). In conjunction with THOC5 functions in NXF1-NXT1 mediated nuclear export of HSP70 mRNA; both proteins enhance the RNA binding activity of NXF1 and are required for NXF1 localization to the nuclear rim (PubMed:19165146). Involved in mRNA export of C5-methylcytosine (m5C)- containing mRNAs: specifically recognizes and binds m5C mRNAs and mediates their nucleo-cytoplasmic shuttling (PubMed:28418038). Acts as a chaperone and promotes the dimerization of transcription factors containing basic leucine zipper (bZIP) domains and thereby promotes transcriptional activation (PubMed:10488337). Involved in transcription elongation and genome stability (PubMed:12438613). |
| **Cellular Location** | Nucleus. Nucleus speckle Cytoplasm Note=Colocalizes with the core EJC, NXF1 and DDX39B in the nucleus and nuclear speckles. Travels to the cytoplasm as part of the exon junction complex (EJC) bound to mRNA (PubMed:19324961). Localizes to regions surrounding nuclear speckles known as perispeckles in which TREX complex assembly seems to occur (PubMed:23826332) |
| **Tissue Location** | Expressed in a wide variety of cancer types. |

## Background

Export adapter involved in nuclear export of spliced and unspliced mRNA. Binds mRNA which is thought to be transferred to the NXF1-NXT1 heterodimer for export (TAP/NFX1 pathway). Component of the TREX complex which is thought to couple mRNA transcription, processing and nuclear export, and specifically associates with spliced mRNA and not with unspliced pre-mRNA. TREX is recruited to spliced mRNAs by a transcription-independent mechanism, binds to mRNA upstream of the exon-junction complex (EJC) and is recruited in a splicing- and cap-dependent manner to a region near the 5' end of the mRNA where it functions in mRNA export to the cytoplasm. TREX recruitment occurs via an interaction between ALYREF/THOC4 and the cap-binding protein NCBP1. The TREX complex is essential for the export of Kaposi's sarcoma-associated herpesvirus (KSHV) intronless mRNAs and infectious virus production; ALYREF/THOC4 mediates the recruitment of the TREX complex to the intronless viral mRNA. Required for TREX complex assembly and for linking DDX39B to the cap-binding complex (CBC). In conjunction with THOC5 functions in NXF1-NXT1 mediated nuclear export of HSP70 mRNA; both proteins enhance the RNA binding activity of NXF1 and are required for NXF1 localization to the nuclear rim. Involved in the nuclear export of intronless mRNA; proposed to be recruited to intronless mRNA by ATP-bound DDX39B. Involved in transcription elongation and genome stability.

## Images

Western Blot analysis of LOVO cells using ALY Polyclonal Antibody




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