

## ALY Polyclonal Antibody Catalog # AP68391

### Specification

#### ALY Polyclonal Antibody - Product Information

Application	WB
Primary Accession	<a href="#">Q86V81</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal

#### ALY Polyclonal Antibody - Additional Information

**Gene ID** 10189

#### Other Names

ALYREF; ALY; BEF; THOC4; THO complex subunit 4; Tho4; Aly 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.

#### Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

#### Storage Conditions

-20°C

#### ALY Polyclonal Antibody - Protein Information

**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:<a href="http://www.uniprot.org/citations/15833825" target="\_blank">15833825</a>, PubMed:<a href="http://www.uniprot.org/citations/15998806" target="\_blank">15998806</a>, PubMed:<a href="http://www.uniprot.org/citations/17190602" target="\_blank">17190602</a>). 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:<a href="http://www.uniprot.org/citations/15833825" target="\_blank">15833825</a>, PubMed:<a href="http://www.uniprot.org/citations/15998806" target="\_blank">15998806</a>, PubMed:<a href="http://www.uniprot.org/citations/17190602" target="\_blank">17190602</a>). Involved in the nuclear export of intronless mRNA; proposed to

be recruited to intronless mRNA by ATP-bound DDX39B (PubMed:<a href="http://www.uniprot.org/citations/17984224" target="\_blank">17984224</a>). Plays a key role in mRNP recognition and mRNA packaging by bridging the mRNP-bound EJC and the TREX core complex (PubMed:<a href="http://www.uniprot.org/citations/37020021" target="\_blank">37020021</a>). TREX recruitment occurs via an interaction between ALYREF/THOC4 and the cap- binding protein NCBP1 (PubMed:<a href="http://www.uniprot.org/citations/15833825" target="\_blank">15833825</a>, PubMed:<a href="http://www.uniprot.org/citations/15998806" target="\_blank">15998806</a>, PubMed:<a href="http://www.uniprot.org/citations/17190602" target="\_blank">17190602</a>, PubMed:<a href="http://www.uniprot.org/citations/37020021" target="\_blank">37020021</a>). Required for TREX complex assembly and for linking DDX39B to the cap-binding complex (CBC) (PubMed:<a href="http://www.uniprot.org/citations/15998806" target="\_blank">15998806</a>, PubMed:<a href="http://www.uniprot.org/citations/17984224" target="\_blank">17984224</a>, PubMed:<a href="http://www.uniprot.org/citations/37020021" target="\_blank">37020021</a>). Binds mRNA which is thought to be transferred to the NXF1-NXT1 heterodimer for export (TAP/NXF1 pathway) (PubMed:<a href="http://www.uniprot.org/citations/11675789" target="\_blank">11675789</a>, PubMed:<a href="http://www.uniprot.org/citations/11707413" target="\_blank">11707413</a>, PubMed:<a href="http://www.uniprot.org/citations/11979277" target="\_blank">11979277</a>, PubMed:<a href="http://www.uniprot.org/citations/15833825" target="\_blank">15833825</a>, PubMed:<a href="http://www.uniprot.org/citations/15998806" target="\_blank">15998806</a>, PubMed:<a href="http://www.uniprot.org/citations/17190602" target="\_blank">17190602</a>, PubMed:<a href="http://www.uniprot.org/citations/18364396" target="\_blank">18364396</a>, PubMed:<a href="http://www.uniprot.org/citations/22144908" target="\_blank">22144908</a>, PubMed:<a href="http://www.uniprot.org/citations/22893130" target="\_blank">22893130</a>, PubMed:<a href="http://www.uniprot.org/citations/23222130" target="\_blank">23222130</a>, PubMed:<a href="http://www.uniprot.org/citations/25662211" target="\_blank">25662211</a>). 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:<a href="http://www.uniprot.org/citations/19165146" target="\_blank">19165146</a>). Involved in mRNA export of C5-methylcytosine (m5C)- containing mRNAs: specifically recognizes and binds m5C mRNAs and mediates their nucleo-cytoplasmic shuttling (PubMed:<a href="http://www.uniprot.org/citations/28418038" target="\_blank">28418038</a>). Acts as a chaperone and promotes the dimerization of transcription factors containing basic leucine zipper (bZIP) domains and thereby promotes transcriptional activation (PubMed:<a href="http://www.uniprot.org/citations/10488337" target="\_blank">10488337</a>). Involved in transcription elongation and genome stability (PubMed:<a href="http://www.uniprot.org/citations/12438613" target="\_blank">12438613</a>).

### 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.

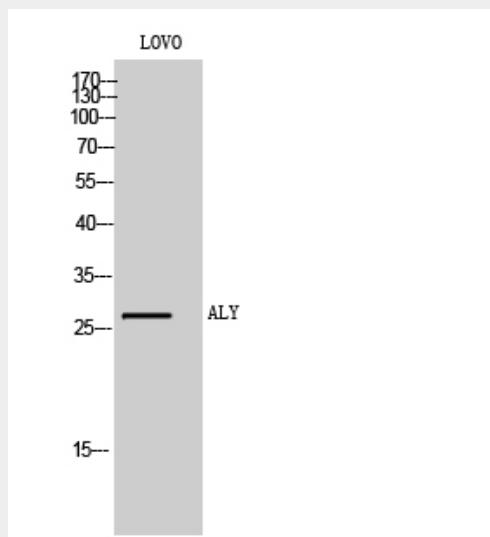
### ALY Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

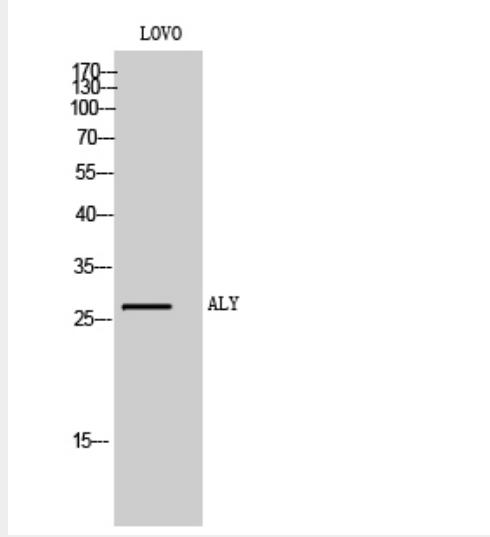
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)

- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### ALY Polyclonal Antibody - Images



Western Blot analysis of LOVO cells using ALY Polyclonal Antibody



Western Blot analysis of LOVO cells using ALY Polyclonal Antibody

### ALY Polyclonal Antibody - 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.