

Aly Antibody

Rabbit mAb Catalog # AP92228

Specification

Aly Antibody - Product Information

Application WB, IHC, FC, ICC, IP

Primary Accession
Reactivity
Rat
Clonality
Monoclonal

Other Names

ALY; ALY/REF; BEF; REF; Tho4; thoc4;

Isotype Rabbit IgG
Host Rabbit
Calculated MW 26888 Da

Aly Antibody - Additional Information

Dilution WB~~1:1000

IHC~~1:100~500 FC~~1:10~50 ICC~~N/A IP~~N/A

Purification Affinity-chromatography

Immunogen A synthesized peptide derived from human

Alv

Description Component of the THO subcomplex of the

TREX complex. The TREX complex

specifically associates with spliced mRNA

and not with unspliced pre-mRNA. It 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. Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid

freeze / thaw cycle.

Aly Antibody - Protein Information

Name ALYREF

Synonyms ALY, BEF, THOC4

Storage Condition and Buffer



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

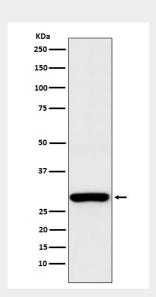
Expressed in a wide variety of cancer types.

Aly Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

Aly Antibody - Images



Western blot analysis of Aly expression in HEK293 cell lysate.