

**THOC4 Antibody (Center)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP16403c****Specification**

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**THOC4 Antibody (Center) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q86V81</a>
Other Accession	<a href="#">Q08583</a> , <a href="#">Q3T0I4</a> , <a href="#">NP_005773.3</a>
Reactivity	Human
Predicted	Bovine, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	26888
Antigen Region	60-89

**THOC4 Antibody (Center) - Additional Information****Gene ID** 10189**Other Names**

THO complex subunit 4, Tho4, Ally of AML-1 and LEF-1, Aly/REF export factor, Transcriptional coactivator Aly/REF, bZIP-enhancing factor BEF, ALYREF, ALY, BEF, THOC4

**Target/Specificity**

This THOC4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 60-89 amino acids from the Central region of human THOC4.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

THOC4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

**THOC4 Antibody (Center) - 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:[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](#))

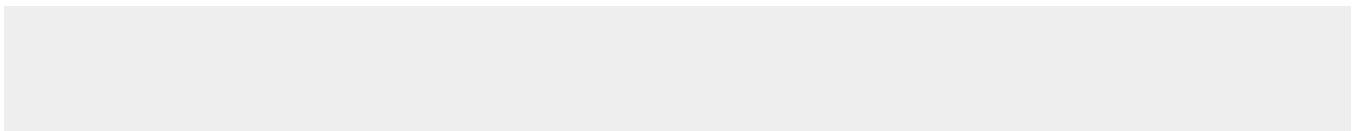
**Tissue Location**

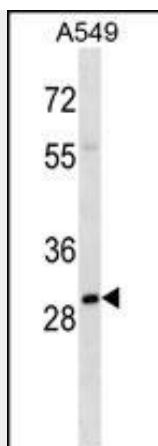
Expressed in a wide variety of cancer types.

**THOC4 Antibody (Center) - 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](#)

**THOC4 Antibody (Center) - Images**



THOC4 Antibody (Center) (Cat. #AP16403c) western blot analysis in A549 cell line lysates (35ug/lane). This demonstrates the THOC4 antibody detected the THOC4 protein (arrow).

#### **THOC4 Antibody (Center) - Background**

THOC4 is a heat stable, nuclear protein and functions as a molecular chaperone. It is thought to regulate dimerization, DNA binding, and transcriptional activity of basic region-leucine zipper (bZIP) proteins.

#### **THOC4 Antibody (Center) - References**

Corbin-Lickfett, K.A., et al. J. Virol. 84(5):2212-2222(2010)  
Souki, S.K., et al. J. Virol. 83(17):8970-8975(2009)  
Johnson, L.A., et al. J. Virol. 83(13):6335-6346(2009)  
Colgan, K.J., et al. J. Gen. Virol. 90 (PT 6), 1455-1460 (2009) :  
Katahira, J., et al. EMBO J. 28(5):556-567(2009)