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THOC4 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP16403c

Specification

THOC4 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q86V81

THOC4 Antibody (Center) Blocking Peptide - 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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

THOC4 Antibody (Center) Blocking Peptide - Protein Information

Name ALYREF

Synonyms ALY, BEF, THOC4

Function
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) (PubMed:15833825, PubMed:15998806, PubMed:17190602, PubMed:11707413, PubMed:11675789, PubMed:11979277, PubMed:18364396, PubMed:22144908, PubMed:22893130, PubMed:23222130, PubMed:25662211). 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

(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 (PubMed:15833825, PubMed:15998806, PubMed:17190602). TREX recruitment occurs via an interaction between ALYREF/THOC4 and the cap-binding protein NCBP1 (PubMed:15833825, PubMed:15998806, PubMed:17190602). 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 (PubMed:18974867). Required for TREX complex assembly and for linking DDX39B to the cap-binding complex (CBC) (PubMed:15998806, PubMed:17984224). 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 the nuclear export of intronless mRNA; proposed to be recruited to intronless mRNA by ATP-bound DDX39B. Involved in transcription elongation and genome stability (PubMed:12438613, PubMed:17984224). Involved in mRNA export of C5-methylcytosine (m5C)-containing mRNAs: specifically recognizes and binds m5C mRNAs and mediates their nucleo- cytoplasmic shuttling (PubMed:28418038).

Cellular Location
Nucleus. Nucleus speckle Cytoplasm Note=Colocalizes with the core EJC, ALYREF/THOC4, 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) Blocking Peptide - Protocols

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

- Blocking Peptides

THOC4 Antibody (Center) Blocking Peptide - Images

THOC4 Antibody (Center) Blocking Peptide - Background

THOC4 is a heat stable, nuclearprotein and functions as a molecular chaperone. It is thought toregulate dimerization, DNA binding, and transcriptional activity ofbasic region-leucine zipper (bZIP) proteins.

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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)