abcam

ab284812

Anti-THOC5 antibody [EP6904] - BSA and Azide free

RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP6904
Purity	Tissue culture supernatant

Reactivity data

IP

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

WB

Tested

Species	Rat, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information THOC5

Function Component of the THO subcomplex of the TREX complex which is thought to couple mRNA transcription, processing and nuclear export, and which specifically associates with spliced mRNA and not with unspliced pre-mRNA (PubMed:15833825, PubMed:15998806, PubMed:17190602). Plays a key structural role in the oligomerization of the THO-DDX39B complex (PubMed:33191911). 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). THOC5 in conjunction with ALYREF/THOC4 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 transcription elongation and genome stability (PubMed:18974867). Involved in alternative polyadenylation site choice by recruiting CPSF6 to 5' region of target genes; probably mediates association of the TREX and CFIm complexes (PubMed:23685434). Regulates the expression of myeloid transcription factors CEBPA, CEBPB and GAB2 by enhancing the levels of phosphatidylinositol 3,4,5-trisphosphate. May be involved in the differentiation of granulocytes and adipocytes. Essential for hematopoietic primitive cell survival and plays an integral role in monocytic development. (Microbial infection) The TREX complex is essential for the export of Kaposi's sarcoma-associated herpesvirus (KSHV) intronless mRNAs and infectious virus production.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab284812 is the carrier-free version of ab137051

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	THOC5 also known as Fms-interacting protein 1 (FIP1L1) or HPR1 is a component of the transcription/export (TREX) complex. With a mass of around 100 kDa THOC5 operates at the intersection of transcription and mRNA processing. This protein localizes mainly in the nucleus where it executes its role in RNA metabolism. THOC5 is necessary for transporting newly synthesized mRNA from the nucleus to the cytoplasm and is constitutively expressed in various tissues including liver and testis.
Biological function summary	This THOC5 protein plays an important role in mRNA processing and export. As part of the TREX complex it assists in coupling transcription with mRNA processing and subsequent export. Through its orchestrated activity THOC5 facilitates the efficient flow of genetic information from DNA to protein synthesis machinery. THOC5 influences the stability and quality of mRNA transcripts by directly binding to certain RNA sequences.
Pathways	One can find THOC5 participating in the mRNA splicing and transport pathways. This protein's role is integrally linked with the DNA-directed RNA polymerase II contributing to the processes that manage RNA synthesis and modification. Additionally THOC5 interacts with other components of the TREX complex such as THOC2 and THOC7 to maintain proper RNA metabolism and cellular function.
Associated diseases and disorders	THOC5 has relevance to cancer. Some studies have found dysregulation of THOC5 in various malignancies including leukemia and liver cancer. Its association with the FUS protein suggests a link to neurodegenerative conditions since FUS mutations show involvement in amyotrophic lateral sclerosis (ALS). Imbalances in THOC5 levels can cause aberrant mRNA processing contributing to disease progression.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

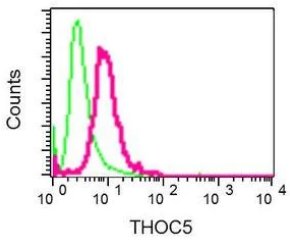
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

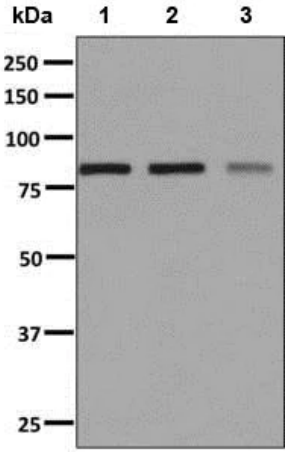
2 product images



Flow Cytometry (Intracellular) - Anti-THOC5 antibody [EP6904] - BSA and Azide free (ab284812)

THOC5 Flow Cytometry (Intracellular) staining using rabbit Anti-THOC5 antibody

This data was developed using ab137051, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of permeabilized 293T cells labelling THOC5 with ab137051 at dilution 1/10 (pink) or a Rabbit IgG negative control (green).



Western blot - Anti-THOC5 antibody [EP6904] - BSA and Azide free (ab284812)

THOC5 Western blot staining using rabbit Anti-THOC5 antibody

This data was developed using ab137051, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-THOC5 antibody [EP6904] - BSA and Azide free (ab284812) at 1/1000 dilution

Lane 1:
293T cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
PC-12 at 10 µg

Secondary

All lanes:
HRP labelled Goat anti-Rabbit IgG at 1/2000 dilution

Predicted band size: 79 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.