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KD-Validated Anti-THO Complex Subunit 1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1763

Specification

KD-Validated Anti-THO Complex Subunit 1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q96FV9
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 76 kDa , observed , 76 kDa KDa**
Gene Name	**THOC1**
Aliases	**THOC1; THO Complex Subunit 1; HPR1; P84; Nuclear Matrix Protein P84; THO Complex 1; HTREX84; P84N5; Tho1; DFNA86**
Immunogen	**A synthesized peptide derived from human Nuclear Matrix Protein p84**

KD-Validated Anti-THO Complex Subunit 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**9984**

Other Names
THO complex subunit 1, Nuclear matrix protein p84, p84N5, hTREX84, THOC1, HPR1

KD-Validated Anti-THO Complex Subunit 1 Rabbit Monoclonal Antibody - Protein Information

Name THOC1

Synonyms HPR1

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). Required for efficient export of polyadenylated RNA (PubMed:23222130). The THOC1-THOC2-THOC3 core complex alone is sufficient to bind export factor NXF1-NXT1 and promote ATPase activity of DDX39B/UAP56 (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). Regulates transcriptional elongation of a subset of genes (PubMed:22144908). Involved in genome stability by preventing co-transcriptional R-loop formation (By similarity). May play a role in hair cell formation, hence may be involved in hearing (By similarity).

Cellular Location
[Isoform 1]: Nucleus speckle. Nucleus, nucleoplasm. Nucleus matrix. Cytoplasm. Note=Can shuttle between the nucleus and cytoplasm. Nuclear localization is required for induction of apoptotic cell death. Translocates to the cytoplasm during the early phase of apoptosis execution

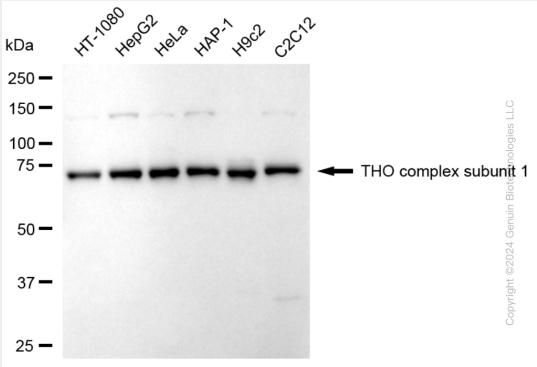
Tissue Location
Ubiquitous. Expressed in various cancer cell lines. Expressed at very low levels in normal breast epithelial cells and highly expressed in breast tumors. Expression is strongly associated with an aggressive phenotype of breast tumors and expression correlates with tumor size and the metastatic state of the tumor progression

KD-Validated Anti-THO Complex Subunit 1 Rabbit Monoclonal 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 Cytomety
- Cell Culture

KD-Validated Anti-THO Complex Subunit 1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-THO complex subunit 1 antibody (Cat#AGI1763). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-THO complex subunit 1 antibody (Cat#AGI1763, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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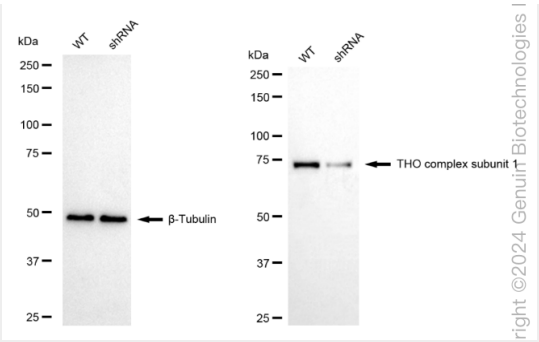
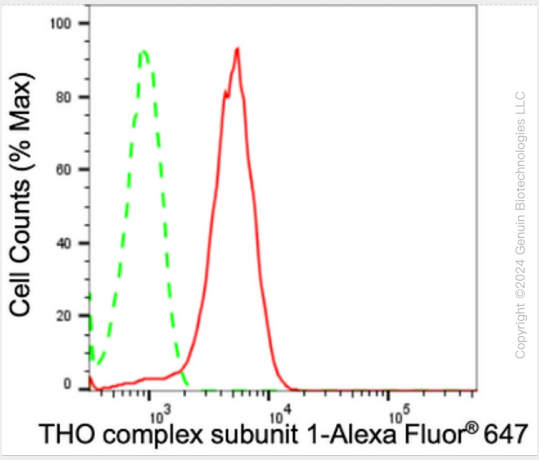
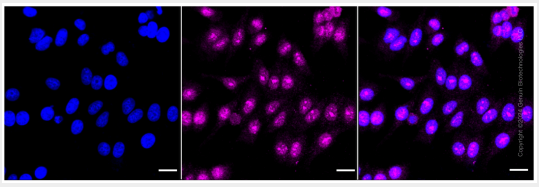


Western blotting analysis using anti-THO complex subunit 1 antibody (Cat#AGI1763). THO complex subunit 1 expression in wild-type (WT) and THO complex subunit 1 (THOC1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-THO complex subunit 1 antibody (Cat#AGI1763, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of THO complex subunit 1 expression in HepG2 cells using anti-THO complex subunit 1 antibody (Cat#AGI1763, 1:2,000). Green, isotype control; red, THO complex subunit 1.



Immunocytochemical staining of HepG2 cells with anti-THO complex subunit 1 antibody (Cat#AGI1763, 1:1,000). Nuclei were stained blue with DAPI; THO complex subunit 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.