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

Rabbit monoclonal antibody
Catalog # AGI1763

Product Information

Application	WB, FC, ICC
Primary Accession	Q96FV9
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Names	24GB2205
Calculated MW	75666
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

Additional Information

Gene ID	9984
Other Names	THO complex subunit 1, Nuclear matrix protein p84, p84N5, hTREX84, THOC1, HPR1

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