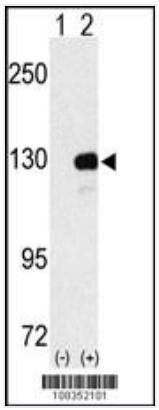
RENT1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	RENT1, Polyclonal Antibody
Full Product Name	RENT1, NT (Regulator of Nonsense Transcripts 1, ATP-dependent Helicase RENT1, Nonsense mRNA Reducing Factor 1, NORF1, Up-frameshift Suppressor 1 Homolog, hUpf1, KIAA0221, UPF1) (FITC)
Product Gene Name	anti-RENT1 antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Fluorescein Isothiocyanate (FITC).
Purity/Purification	Purified by Ammonium Sulfate Precipitation.
Specificity	Recognizes human RENT1.
Preparation and Storage	Store product at 4 degree C if to be used immediately within two weeks. For long-term storage, aliquot to avoid repeated freezing and thawing and store at -20 degree C. Aliquots are stable at -20 degree C for 12 months after receipt. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer.
Molecular Weight	123,036 Da
OMIM	601430
3D Structure	ModBase 3D Structure for Q92900
Immunogen	KLH conjugated synthetic peptide between corresponding to a portion of amino acids within aa 304~334 in the N-terminal region of human RENT1.
Conjugate	FITC
Note	Preservative Free
Product Categories/Family for anti-RENT1 antibody	Antibodies; Transcription Factors
Applications Tested/Suitable for anti-RENT1 antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-RENT1 antibody	WB: 1:100-1:500 ELISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-RENT1 antibody	MBS6497204 is an antibody targeting RENT1. Also known as RENT1, NT (Regulator of Nonsense Transcripts 1, ATP-dependent Helicase RENT1, Nonsense mRNA Reducing Factor 1, NORF1, Up-frameshift Suppressor 1 Homolog, hUpf1, KIAA0221, UPF1) (FITC). Reactive in Human. Host: Rabbit.
Product References and Citations for anti-RENT1 antibody	1. Ohnishi, T., et al., Mol. Cell 12(5):1187-1200 (2003). 2. Lykke-Andersen, J., Mol. Cell. Biol. 22(23):8114-8121 (2002). 3. Carastro, L.M., et al., Nucleic Acids Res. 30(10):2232-2243 (2002). 4. Mendell, J.T., et al., Science 298(5592):419-422 (2002). 5. Serin, G., et al., Mol. Cell. Biol. 21(1):209-223 (2001). 6.JQ Kang, et al. J Neurosci. 2009; 29: 2833.
Other Notes	Small volumes of anti-RENT1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.



Western Blot (WB) of anti-RENT1 antibody
Western blot analysis of RENT1 (arrow) using rabbit polyclonal RENT1 Antibody (N-term). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the RENT1 gene (Lane 2) (Origene Technologies).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RENT1. It may not necessarily be applicable to this product.

NCBI GI #	18375673
NCBI GeneID	5976
NCBI Accession #	NP_002902
UniProt Primary Accession #	Q92900
UniProt Secondary Accession #	O00239; O43343; Q86Z25; Q92842
UniProt Related Accession #	Q92900
GenBank Nucleotide #	NM_002911
NCBI Official Full Name	regulator of nonsense transcripts 1 isoform 2
NCBI Official Synonym Full Names	UPF1 regulator of nonsense transcripts homolog (yeast)
NCBI Official Symbol	UPF1
NCBI Official Synonym Symbols	HUPF1; NORF1; RENT1; smg-2; pNORF1
UniProt Protein Name	Regulator of nonsense transcripts 1
UniProt Synonym Protein Names	ATP-dependent helicase RENT1; Nonsense mRNA reducing factor 1; NORF1; Up-frameshift suppressor 1 homolog; hUpf1
Protein Family	Putative regulator of nonsense transcripts
UniProt Gene Name	UPF1
UniProt Synonym Gene Names	KIAA0221; RENT1; NORF1; hUpf1
UniProt Entry Name	RENT1_HUMAN
NCBI Protein Information	regulator of nonsense transcripts 1; ATP-dependent helicase RENT1; delta helicase; nonsense mRNA reducing factor 1; smg-2 homolog, nonsense mediated mRNA decay factor; up-frameshift mutation 1 homolog; up-frameshift suppressor 1 homolog; yeast Upf1p homol

UniProt Comments for RENT1	RENT1: RNA-dependent helicase and ATPase required for nonsense- mediated decay (NMD) of mRNAs containing premature stop codons. Is recruited to mRNAs upon translation termination and undergoes a cycle of phosphorylation and dephosphorylation; its phosphorylation appears to be a key step in NMD. Recruited by release factors to stalled ribosomes together with the SMG1C protein kinase complex to form the transient SURF (SMG1-UPF1-eRF1- eRF3) complex. In EJC-dependent NMD, the SURF complex associates with the exon junction complex (EJC) (located 50-55 or more nucleotides downstream from the termination codon) through UPF2 and allows the formation of an UPF1-UPF2-UPF3 surveillance complex which is believed to activate NMD. Phosphorylated UPF1 is recognized by EST1B/SMG5, SMG6 and SMG7 which are thought to provide a link to the mRNA degradation machinery involving exonucleolytic and endonucleolytic pathways, and to serve as adapters to protein phosphatase 2A (PP2A), thereby triggering UPF1 dephosphorylation and allowing the recycling of NMD factors. UPF1 can also activate NMD without UPF2 or UPF3, and in the absence of the NMD-enhancing downstream EJC indicative for alternative NMD pathways. Plays a role in replication-dependent histone mRNA degradation at the end of phase S; the function is independent of UPF2. For the recognition of premature termination codons (PTC) and initiation of NMD a competitive interaction between UPF1 and PABPC1 with the ribosome-bound release factors is proposed. The ATPase activity of UPF1 is required for disassembly of mRNPs undergoing NMD. Essential for embryonic viability. Found in a post-splicing messenger ribonucleoprotein (mRNP) complex. Associates with the exon junction complex (EJC). Associates with the SGM1C complex; is phosphorylated by the complex kinase component SGM1. Interacts with UPF2, UPF3A and UPF3B. Interacts with EST1A and SLBP. Interacts (when hyperphosphorylated) with PNRC2. Interacts with EIF2C1, EIF2C2 and GSPT2. Ubiquitous. Belongs to the DNA2/NAM7 helicase family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: RNA-binding; C2H2-type zinc finger protein; EC 3.6.4.-; Hydrolase; EC 3.6.1.- Chromosomal Location of Human Ortholog: 19p13.11 Cellular Component: nucleoplasm; cytoplasm; cytosol; nucleus; chromatin Molecular Function: protein binding; DNA binding; zinc ion binding; RNA binding; chromatin binding; helicase activity; ATP binding; ATP-dependent RNA helicase activity Biological Process: mRNA export from nucleus; dosage compensation, by inactivation of X chromosome; mRNA catabolic process, nonsense-mediated decay; gene expression; DNA replication; DNA repair; regulation of translational termination
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