

Product Name: Rent1 Rabbit Polyclonal Antibody
Catalog #: APRab17020



Summary

Production Name	Rent1 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ELISA
Reactivity	Human,Mouse

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	UPF1 UPF1; KIAA0221; RENT1; Regulator of nonsense transcripts 1; ATP-dependent helicase
Alternative Names	RENT1; Nonsense mRNA reducing factor 1; NORF1; Up-frameshift suppressor 1 homolog; hUpf1
Gene ID	5976.0
SwissProt ID	Q92900.The antiserum was produced against synthesized peptide derived from human UPF1. AA range:299-348

Application

Dilution Ratio	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:20000..
Molecular Weight	110kD

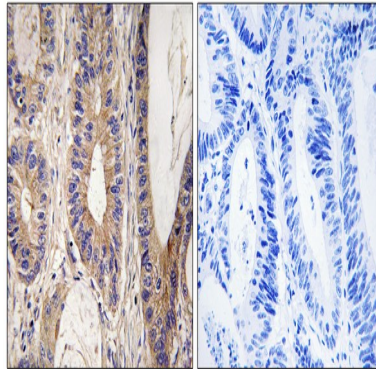
Background

This gene encodes a protein that is part of a post-splicing multiprotein complex involved in both mRNA nuclear export and mRNA surveillance. mRNA surveillance detects exported mRNAs with truncated open reading frames and initiates nonsense-mediated mRNA decay (NMD). When translation ends upstream from the last exon-exon junction, this triggers NMD to degrade mRNAs containing premature stop codons. This protein is located only in the cytoplasm. When translation ends, it interacts with the protein that is a functional homolog of yeast Upf2p to trigger mRNA decapping. Use of multiple polyadenylation sites has been noted for this gene. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jul 2014],domain:The [ST]-Q motif constitutes a recognition sequence for kinases from the PI3/PI4-kinase family.,function:Part of a post-splicing multiprotein complex. Involved in nonsense-mediated decay (NMD) as part of the SMG1C complex, a mRNA surveillance complex that recognizes and degrades mRNAs containing premature translation termination codons (PTCs). The complex probably acts by associating with ribosomes during translation termination on mRNPs. If an exon junction complex (EJC) is located 50-55 or more nucleotides downstream from the termination codon, RENT1 is phosphorylated by SMG1, triggering nonsense-mediated decay (NMD). Essential for embryonic viability.,PTM:Phosphorylated by SMG1; required for formation of mRNA surveillance complexes. Phosphorylated upon DNA damage, probably by ATM or ATR.,similarity:Belongs to the DNA2/NAM7 helicase family.,similarity:Contains 1 C2H2-type zinc finger.,subcellular location:Hyperphosphorylated form is targeted to the P-body, while unphosphorylated protein is distributed throughout the cytoplasm.,subunit:Found in a complex with RENT1, RENT2, RENT3A and RENT3B. Found in a complex with PARN. Found in a post-splicing complex with SMG1, NXF1, RBM8A, RENT1, RENT2, RENT3A, RENT3B and RNPS1. Found in a mRNA decay complex with EXOSC2, EXOSC4, EXOSC10, PARN, XRN1, DCP2, RENT1, RENT2 and RENT3B. Interacts with EST1A and RENT2. Component of the SMG1C complex, at least composed of SMG1, SMG8 and SMG9. The SMG1C complex is then recruited on premature translation termination codons (PTCs) to form the ribosome:SURF complex, at least composed of ERF1, ERF3 (ERF3A or ERF3B), EEF2, UPF1/RENT1, SMG1, SMG8 and SMG9. Interacts (when hyperphosphorylated) with PNRC2.,tissue specificity:Ubiquitous.,

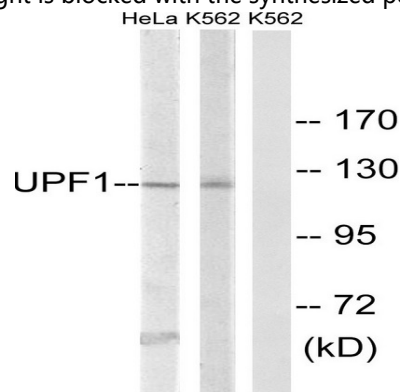
Research Area

Image Data

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Immunohistochemistry analysis of paraffin-embedded human colon carcinoma tissue, using UPF1 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from K562 and HeLa cells, using UPF1 Antibody. The lane on the right is blocked with the synthesized peptide.

Note

For research use only.