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RENT1+hUPF1 Rabbit pAb

Catalog # AP96409

Product Information

Application	WB
Reactivity	Human, Mouse
Predicted	Rat, Chicken, Dog, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	124 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human RENT1/hUPF1
Epitope Specificity	301-450/1129
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the DNA2/NAM7 helicase family.Contains 1 C2H2-type zinc finger.
SUBUNIT	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.
Post-translational modifications	Phosphorylated by SMG1; required for formation of mRNA surveillance complexes. Phosphorylated upon DNA damage, probably by ATM or ATR.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	In eukaryotes, it is essential to have the ability to detect and degrade transcripts that lack full coding potential. Nonsense-mediated RNA decay (NMD) protects the organism by avoiding the translation of truncated peptides with dominant negative or deleterious gain-of-function potential. Rent1, a mammalian ortholog of Upflp, is essential for embryonic viability (1–3). Rent1 (also designated regulator of nonsense transcripts and HUpf1) contains an N-terminal zinc finger-like domain, NTPase domains and a region comprised of domains that define Rent1 as a superfamily group I helicase.

Additional Information

Gene ID	5976
Other Names	HUPF1; NORF1; RENT1; UTF; pNORF1; smg-2; UPF1 RNA helicase and ATPase; regulator of nonsense transcripts 1; UPF1 regulator of nonsense transcripts homolog (yeast); UPF1, RNA helicase and ATPase; UP Frameshift 1; smg-2 homolog, nonsense mediated mRNA decay factor (C. elegans)
Dilution	WB=1:500-2000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Name	RENT1+hUPF1 Rabbit pAb
Function	Plays a role in replication-dependent histone mRNA degradation at the end of phase S. 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 tranlation 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.

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