

Cat No: Kab09271

Product Particulars: anti-UPF1-antibody

Pack Size: 100µg

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Purify: Immunogen affinity purified

Host: Rabbit

Isotype: IgG

Storage: PBS with 0.02% sodium azide and 50% glycerol pH 7.3 , -20°C for 24 months (Avoid repeated freeze / thaw cycles.)

Background (Function): 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.

Immunogen: UPF1 regulator of nonsense transcripts homolog (yeast)

Synonyms: ATP dependent helicase RENT1, FLJ43809, FLJ46894, HUPF1, KIAA0221, NORF1, pNORF1, RENT1, UPF1

Calculated MW: 123kDa

Uniprot ID: Q92900

Specificity: Human, Mouse , Rat

Tested Application: ELISA, WB, IHC, IF, IP

Recommended Dilution: WB : 1:500-1:5000; IHC : 1:20-1:200 ; IF: 1 : 20-1 : 200; IP: 1 : 200-1 : 2000

Gene ID: 5976

Gene Location: Cytoplasm, Nucleus