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UPF3B Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9653c

Product Information

Application	WB, E
Primary Accession	Q9BZI7
Reactivity	Human
Predicted	Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24305
Calculated MW	57762
Antigen Region	320-349

Additional Information

Gene ID	65109
Other Names	Regulator of nonsense transcripts 3B, Nonsense mRNA reducing factor 3B, Up-frameshift suppressor 3 homolog B, hUpf3B, Up-frameshift suppressor 3 homolog on chromosome X, hUpf3p-X, UPF3B, RENT3B, UPF3X
Target/Specificity	This UPF3B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 320-349 amino acids from the Central region of human UPF3B.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	UPF3B Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	UPF3B (HGNC:20439)
Function	Involved in nonsense-mediated decay (NMD) of mRNAs containing premature stop codons by associating with the nuclear exon junction complex

	(EJC) and serving as link between the EJC core and NMD machinery. Recruits UPF2 at the cytoplasmic side of the nuclear envelope and the subsequent formation of an UPF1-UPF2-UPF3 surveillance complex (including UPF1 bound to release factors at the stalled ribosome) is believed to activate NMD. In cooperation with UPF2 stimulates both ATPase and RNA helicase activities of UPF1. Binds spliced mRNA upstream of exon-exon junctions. In vitro, stimulates translation; the function is independent of association with UPF2 and components of the EJC core.
Cellular Location	Nucleus. Cytoplasm Note=Shuttling between the nucleus and the cytoplasm
Tissue Location	Expressed in testis, uterus, prostate, heart, muscle, brain, spinal cord and placenta.

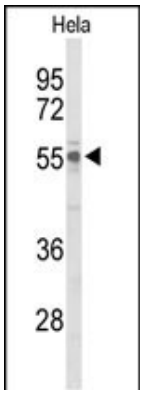
Background

UPF3B is a protein that is part of a post-splicing multiprotein complex involved in both mRNA nuclear export and mRNA surveillance. This protein is one of two functional homologs to yeast Upf3p. 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 binds to the mRNA and remains bound after nuclear export, acting as a nucleocytoplasmic shuttling protein. It forms with Y14 a complex that binds specifically 20 nt upstream of exon-exon junctions.

References

Chan, W.K., et al. Nat. Struct. Mol. Biol. 16(7):747-753(2009)
Woeller, C.F., et al. EMBO Rep. 9(5):446-451(2008)
Chamieh, H., et al. Nat. Struct. Mol. Biol. 15(1):85-93(2008)

Images



Western blot analysis of UPF3B Antibody (Center) (Cat. #AP9653c) in Hela cell line lysates (35ug/lane). UPF3B (arrow) was detected using the purified Pab.

Citations

- Full UPF3B function is critical for neuronal differentiation of neural stem cells.

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