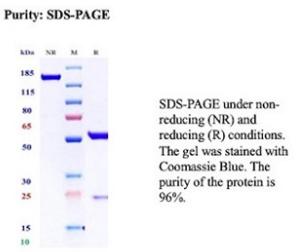
Nonsense-Mediated mRNA Decay Protein Antibody | UPF1 [clone NY1.1.1B6] (V5985)

Catalog No.	Formulation	Size
V5985-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5985-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V5985SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	NY1.1.1B6
Purity	Protein A affinity
UniProt	Q92900
Localization	Cytoplasm, Nucleus
Applications	ELISA
Limitations	This Nonsense-Mediated mRNA Decay Protein/UPF1 antibody is available for research use only.



SDS-PAGE Analysis of Purified Nonsense-Mediated mRNA Decay Protein/UPF1 antibody (clone NY1.1.1B6). Confirmation of Purity and Integrity of Antibody.

Description

Nonsense-Mediated mRNA Decay Protein antibody, also known as UPF1 antibody, recognizes Up-frameshift suppressor 1, a conserved ATP-dependent RNA helicase encoded by the human UPF1 gene on chromosome 19p13.11. Commonly

referred to as RENT1 or regulator of nonsense transcripts 1, UPF1 is predominantly localized in the cytoplasm and shuttles between the nucleus and cytoplasm. Nonsense-Mediated mRNA Decay Protein antibody targets a central effector of the nonsense-mediated mRNA decay pathway, a quality control mechanism that identifies and degrades mRNAs containing premature termination codons to prevent synthesis of truncated or potentially deleterious proteins.

UPF1 belongs to the superfamily 1 helicase family and contains conserved ATP-binding and RNA-binding domains that couple ATP hydrolysis to RNA remodeling. During translation, UPF1 associates with ribosome-bound transcripts and interacts with additional NMD factors including UPF2 and UPF3. Upon recognition of aberrant stop codons, UPF1 undergoes regulated phosphorylation, which promotes recruitment of mRNA decay enzymes and transcript degradation. Beyond classical nonsense-mediated mRNA decay, UPF1 contributes to general mRNA turnover, Staufen-mediated decay, and regulation of transcripts involved in stress responses, proliferation, and differentiation.

UPF1 is broadly expressed across tissues, reflecting its fundamental role in post-transcriptional gene regulation and cellular homeostasis. Subcellularly, it is primarily cytoplasmic and may associate with processing bodies and sites of active translation. Structurally, the protein contains a helicase core domain and regulatory regions that coordinate RNA binding, ATPase activity, and protein-protein interactions. Altered UPF1 expression or pathway dysfunction has been implicated in cancer, viral infection, and neurodevelopmental disorders, where impaired RNA surveillance can influence transcript stability and gene expression programs.

Nonsense-Mediated mRNA Decay Protein antibody is suitable for detecting UPF1 expression in studies of RNA quality control, mRNA decay pathways, and translational regulation. Clone NY1.1.1B6 is a monoclonal antibody designed to recognize UPF1 in research applications, supporting investigation of nonsense-mediated mRNA decay and related post-transcriptional regulatory mechanisms.

Application Notes

Optimal dilution of the Nonsense-Mediated mRNA Decay Protein/UPF1 antibody should be determined by the researcher.

Immunogen

Recombinant human UPF1 protein was used as the immunogen for the Nonsense-Mediated mRNA Decay Protein/UPF1 antibody.

Storage

Nonsense-Mediated mRNA Decay Protein/UPF1 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

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