Datasheet for ABIN6266288

anti-RENT1/UPF1 antibody

3 Images

Go to Product page

Overview

Quantity:	100 µL
Target:	RENT1/UPF1 (UPF1)
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This RENT1/UPF1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC), Immunofluorescence (IF), Immunocytochemistry (ICC)

Product Details

Immunogen:	A synthetic peptide of human UPF1
Isotype:	IgG
Specificity:	UPF1 Antibody detects endogenous levels of total UPF1
Cross-Reactivity:	Human, Mouse (Murine), Rat (Rattus)
Purification:	The antiserum was purified by peptide affinity chromatography using SulfoLink™ Coupling Resin (Thermo Fisher Scientific).

Target Details

Target:	RENT1/UPF1 (UPF1)
Alternative Name:	UPF1 (UPF1 Products)

Target Details

Background:	Description: 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. Gene: UPF1
Molecular Weight:	123kDa
Gene ID:	5976
UniProt:	Q92900
Pathways:	SARS-CoV-2 Protein Interactome

Application Details

Application Notes:	WB 1:500-1:2000 IHC 1:50-1:200, IF/ICC 1:100-1:500
Restrictions:	For Research Use only

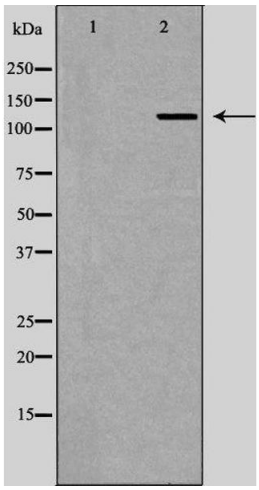
Handling

Format:	Liquid
Concentration:	1 mg/mL

Handling

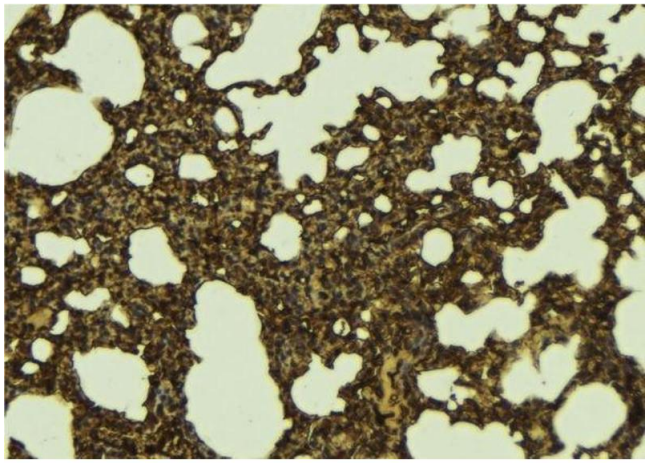
Buffer:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store at -20 °C.Stable for 12 months from date of receipt
Expiry Date:	12 months

Images



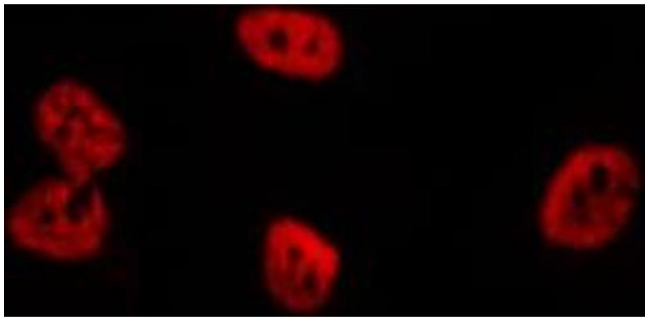
Western Blotting

Image 1. Western blot analysis of Hela whole cell lysates, using UPF1 Antibody. The lane on the left is treated with the antigen-specific peptide.



Immunohistochemistry

Image 2. ABIN6276705 at 1/100 staining Mouse lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22¡ãC. An HRP conjugated goat anti-rabbit antibody was used as the secondary



Immunofluorescence (fixed cells)

Image 3. ABIN6276705 staining Hela cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100,then blocked in 10% serum for 45 minutes at 25¡ãC. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37¡ãC. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody(Cat.# S0006), diluted at 1/600, was used as secondary antibod

