abcam

Product datasheet

Anti-RENT1/hUPF1 antibody [EPR4681] ab109363

Recombinant RabMAb

★★★★★ 2 Abreviews 24 References 12 Images

Overview

Product name	Anti-RENT1/hUPF1 antibody [EPR4681]
Description	Rabbit monoclonal [EPR4681] to RENT1/hUPF1
Host species	Rabbit
Specificity	The mouse recommendation is based on the WB results. We do not guarantee IHC-P for mouse.
Tested applications	**Suitable for:** Flow Cyt (Intra), WB, IP, IHC-P, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HuT-78, NIH/3T3, Raji, SH-SY5Y and HeLa cell lysates
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR4681
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab109363 in the following tested applications.

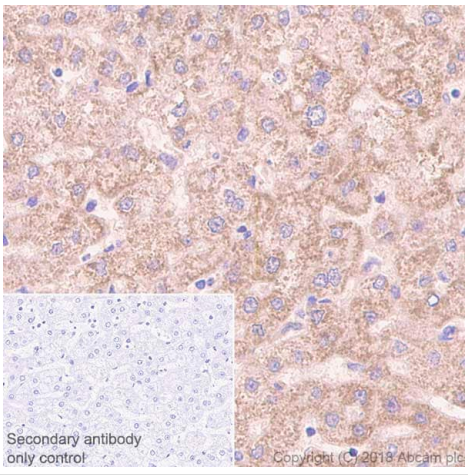
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/10 - 1/100. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB	★★★★★ (2)	1/10000 - 1/50000. Predicted molecular weight: 124 kDa.
IP		1/10 - 1/100.
IHC-P		1/100 - 1/250. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. The mouse recommendation is based on the WB results. We do not guarantee IHC-P for mouse. See **IHC antigen retrieval protocols**.'
ICC/IF		1/500. **For unpurified use at 1/100 - 1/250.**

Target

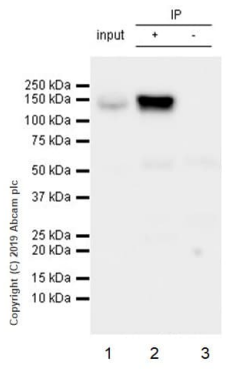
Function	Plays a role in replication-dependent histone mRNA degradation at the end of phase S. Part of a post-splicing multiprotein complex. Involved in nonsense-mediated decay (NMD) as part of the SMG1C complex, a mRNA surveillance complex that recognizes and degrades mRNAs containing premature translation 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.
Tissue specificity	Ubiquitous.
Sequence similarities	Belongs to the DNA2/NAM7 helicase family. Contains 1 C2H2-type zinc finger.
Domain	The [ST]-Q motif constitutes a recognition sequence for kinases from the PI3/PI4-kinase family.
Post-translational modifications	Phosphorylated by SMG1; required for formation of mRNA surveillance complexes. Phosphorylated upon DNA damage, probably by ATM or ATR.
Cellular localization	Cytoplasm. Cytoplasm > P-body. Hyperphosphorylated form is targeted to the P-body, while unphosphorylated protein is distributed throughout the cytoplasm.

Images



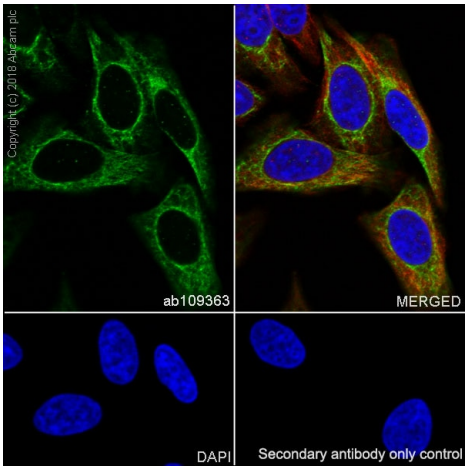
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human liver tissue sections labeling RENT1/hUPF1 with Purified ab109363 at 1:100 dilution (5.14 µg/ml). Heat mediated antigen retrieval was performed using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



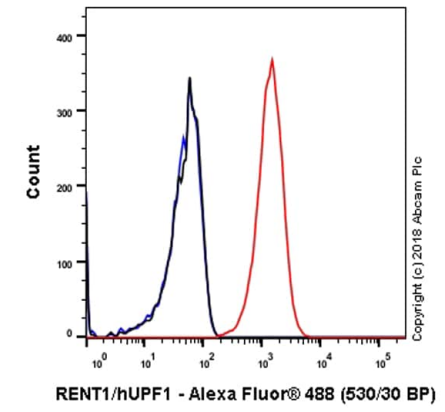
Immunoprecipitation - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

ab109363 (purified) at 1:30 dilution (2µg) immunoprecipitating RENT1/hUPF1 in Raji whole cell lysate.
Lane 1 (input): Raji (Human Burkitt's lymphoma B lymphocyte) whole cell lysate 10µg
Lane 2 (+): ab109363 & Raji whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of ab109363 in Raji whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.



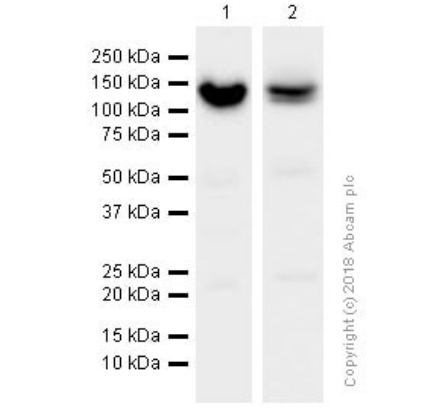
Immunocytochemistry/ Immunofluorescence - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

Immunocytochemistry/ Immunofluorescence analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RENT1/hUPF1 with Purified ab109363 at 1:100 dilution (5.1 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

Intracellular Flow Cytometry analysis of HeLa (Human cervix adenocarcinoma epithelial cell) cells labeling RENT1/hUPF1 with Purified ab109363 at 1/50 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluorr® 488, **ab150077**) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

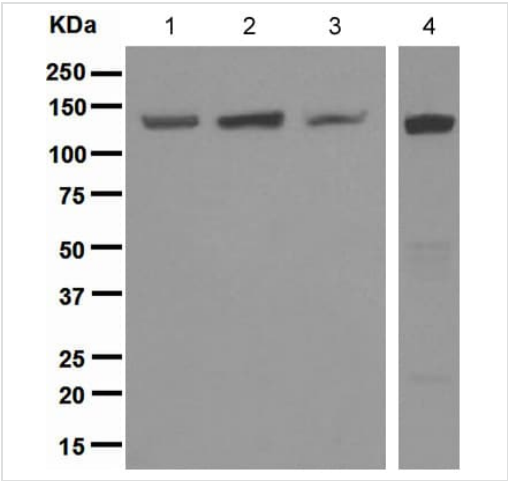
All lanes : Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363) at 1/10000 dilution (Purified)

Lane 1 : HuT-78 (Human Sezary syndrome cutaneous T lymphocyte) whole cell lysates
Lane 2 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysates

Lysates/proteins at 20 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/20000 dilution

Predicted band size: 124 kDa
Observed band size: 130 kDa



Western blot - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

All lanes : Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363) at 1/10000 dilution

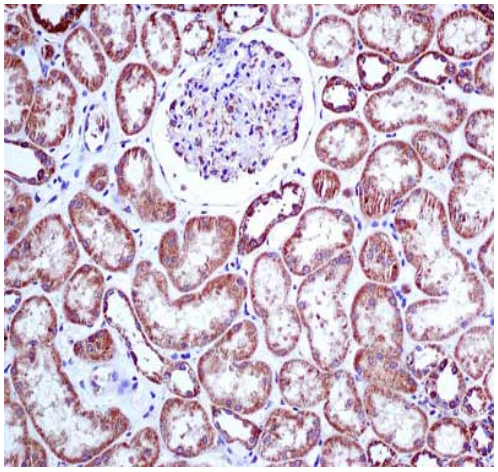
Lane 1 : HuT-78 cell lysate
Lane 2 : Raji cell lysate
Lane 3 : SH-SY5Y cell lysate
Lane 4 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

Performed under reducing conditions.

Predicted band size: 124 kDa

This image was generated using the unpurified version of the product.

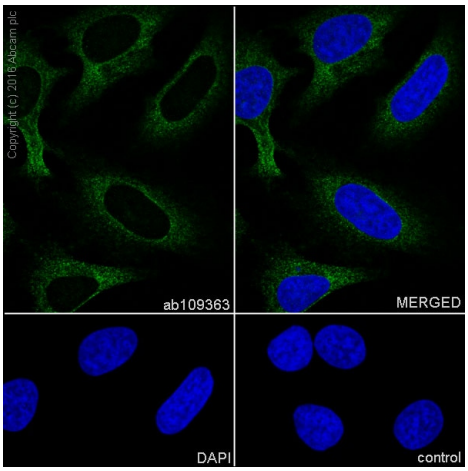


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

ab109363, at 1/100, staining RENT1/hUPF1 in Human kidney tissue by immunohistochemistry.

This image was generated using the unpurified version of the product.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

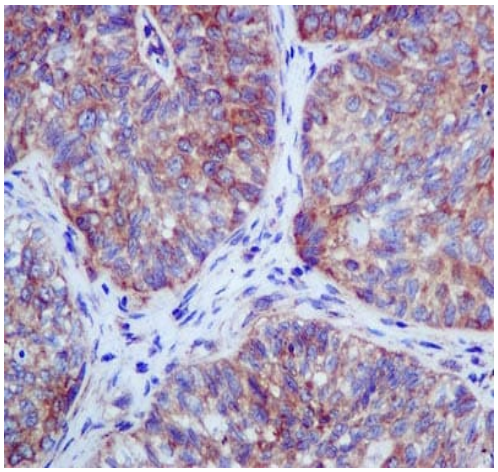


Immunocytochemistry/ Immunofluorescence - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma) cells labelling RENT1/hUPF1 with purified ab109363 at 1/500. Cells were fixed with 100% methanol. **ab150077**, Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. Nuclei were counterstained with DAPI (blue).

Secondary Only Control: PBS was used instead of the primary antibody as the negative control

This image was generated using the unpurified version of the product.

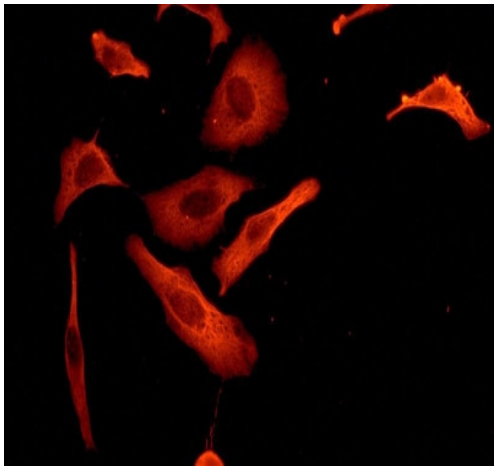


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

ab109363, at 1/100, staining RENT1/hUPF1 in Human transitional cell carcinoma tissue by immunohistochemistry.

This image was generated using the unpurified version of the product.

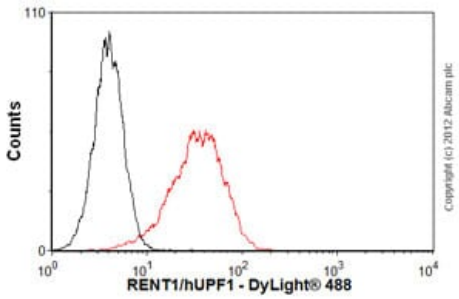
Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

ab109363, at 1/100, staining RENT1/hUPF1 in HeLa cells by immunofluorescence.

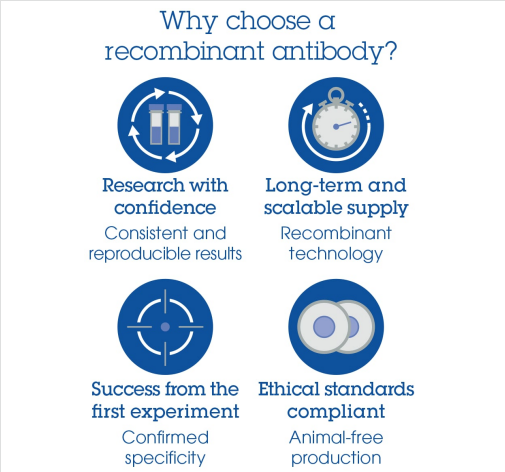
This image was generated using the unpurified version of the product.



Flow Cytometry (Intracellular) - Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

Overlay histogram showing HeLa cells stained with ab109363 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109363, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (**ab96899**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

This image was generated using the unpurified version of the product.



Anti-RENT1/hUPF1 antibody [EPR4681] (ab109363)

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