abcam

ab181080

Anti-UFD1L antibody [EPR12847] - N-terminal

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR12847
Purification technique	Affinity purification Protein A

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Predicted

Species	Mouse, Rat

Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/30
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information UFD1

Function	Essential component of the ubiquitin-dependent proteolytic pathway which degrades ubiquitin fusion proteins. The ternary complex containing UFD1, VCP and

NPLOC4 binds ubiquitinated proteins and is necessary for the export of misfolded proteins from the ER to the cytoplasm, where they are degraded by the proteasome. The NPLOC4-UFD1-VCP complex regulates spindle disassembly at the end of mitosis and is necessary for the formation of a closed nuclear envelope. It may be involved in the development of some ectoderm-derived structures (By similarity). Acts as a negative regulator of type I interferon production via the complex formed with VCP and NPLOC4, which binds to RIGI and recruits RNF125 to promote ubiquitination and degradation of RIGI (PubMed:26471729).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	UFD1L also known as Ubiquitin Fusion Degradation 1 Like is a protein with a molecular mass of approximately 35 kDa. It is expressed throughout most human

	tissues with higher levels observed in the brain heart and skeletal muscle. UFD1L plays an active role in the process of protein degradation by interacting with other molecules in the cell. This protein is part of the ubiquitin proteasome pathway and it partners with NPL4 and VCP/p97 making up a critical component of the ubiquitin-dependent degradation machinery.
Biological function summary	UFD1L interacts with cellular mechanisms for quality control by forming a complex with NPL4 and the ATPase VCP/p97. It functions to recognize and bind misfolded proteins earmarked for degradation thereby regulating protein homeostasis. This UFD1L complex assists in the extraction of ubiquitinated substrates from membranes and chromatin ensuring that only properly folded proteins are allowed to accumulate in cells which is essential for maintaining cellular function.
Pathways	UFD1L is integrally involved in the ER-associated degradation (ERAD) and the ubiquitin-proteasome pathway. In the ERAD pathway UFD1L works closely with VCP/p97 facilitating the removal of misfolded or excess proteins from the endoplasmic reticulum. It contributes to the regulation of the cell cycle and stress responses by ensuring efficient ubiquitin-dependent protein turnover. Its interaction with these pathways highlights its connection to a tightly regulated network of proteins including those involved in proteostasis and cellular stress regulation.
Associated diseases and disorders	UFD1L has been implicated in the pathogenesis of neurodegenerative disorders such as amyotrophic lateral sclerosis (ALS) and Alzheimer's disease. The inappropriate function or expression of UFD1L and its associated proteins including VCP/p97 and NPL4 can lead to the accumulation of misfolded proteins a hallmark in these diseases. Further alterations in UFD1L are also associated with congenital disorders like DiGeorge syndrome linking it to critical developmental processes that go awry when protein degradation pathways are disrupted.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

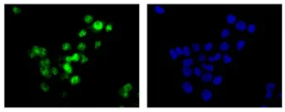
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

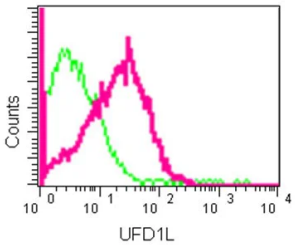
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-UFD1L antibody [EPR12847] - N-terminal (ab181080)

UFD1L Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-UFD1L antibody

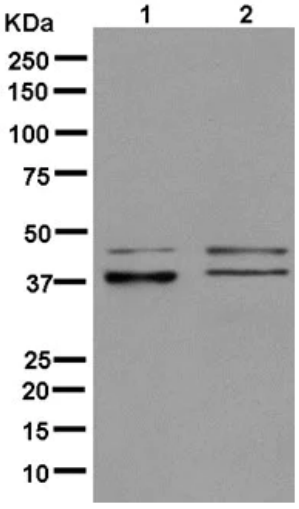
Immunofluorescent analysis of 4% paraformaldehyde fixed A431 cells labeling UFD1L with ab181080 at 1/100 dilution. Secondary antibody Goat anti rabbit IgG (Dylight 488) at 1/200 dilution. Conterstained with Dapi (blue).



Flow Cytometry (Intracellular) - Anti-UFD1L antibody [EPR12847] - N-terminal (ab181080)

UFD1L Flow Cytometry (Intracellular) staining using rabbit Anti-UFD1L antibody

Intracellular flow cytometric analysis of 293 cells (2%paraformaldehyde-fixed) labeling UFD1L with ab181080 at 1/30 dilution (red) or a rabbit IgG (negative) (green), followed by secondary Goat anti rabbit IgG (FITC) at 1/150 dilution. Isotype control: Rabbit IgG



Western blot - Anti-UFD1L antibody [EPR12847] - N-terminal (ab181080)

All lanes:
Western blot - Anti-UFD1L antibody [EPR12847] - N-terminal (ab181080) at 1/2000 dilution

Lane 1:
Raji cell lysate at 1/1000 dilution

Lane 2:
HeLa cell lysate at 1/1000 dilution

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 35 kDa

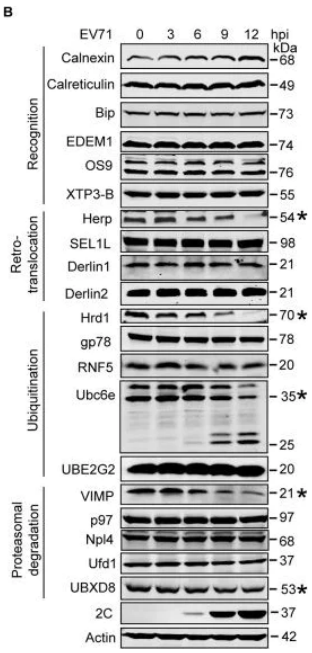


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Western blot - Anti-UFD1L antibody [EPR12847] - N-terminal (ab181080)

UFD1L western blot using anti-UFD1L antibody [EPR12847] - N-terminal ab181080. Publication image and figure legend from Wang, T., Wang, B., et al., 2017, PLoS Pathog, PubMed 28985237.

ab181080 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab181080 please see the product overview.

EV71 targets ERAD at multiple points.(A) Diagram of the key molecules involved in ERAD. (B) RD cells were infected with EV71 (MOI = 10) for the indicated times (hpi: hours post-infection). The cells were then harvested and western blot was performed using the indicated antibodies to detect the indicated ERAD components, EV71 2C, and actin. The ERAD molecules assessed in this study were separated into four categories: substrate recognition, retrotranslocation, ubiquitination, and proteasomal degradation. Asterisks indicate the molecules that were obviously downregulated. (C) Full-size western blots for Herp, Hrd1, VIMP, and UBXD8 described in (B). (D) Quantification of Ubc6e, Herp, Hrd1, VIMP, and UBXD8 in (B). The data are presented as means ± SD of three independent experiments.

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