abcam

ab150424

Anti-HERPUD1 antibody [EPR9649]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 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	EPR9649
Purification technique	Affinity purification Protein A
Concentration	0.165 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
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 HERPUD1

Function Component of the endoplasmic reticulum quality control (ERQC) system also called ER-associated degradation (ERAD) involved in ubiquitin-dependent degradation of misfolded endoplasmic reticulum proteins (PubMed:16289116, PubMed:28827405). Could enhance presenilin-mediated amyloid-beta protein 40 generation. Binds to ubiquilins and this interaction is required for efficient degradation of CD3D via the ERAD pathway (PubMed:18307982).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

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	HERPUD1 also known as Herp is a protein involved in the cellular response to stress especially related to the endoplasmic reticulum (ER). It has a molecular mass of approximately 42 kDa. This protein is expressed in various tissues with high expression levels found in the liver heart and muscle. HERPUD1 becomes particularly upregulated during conditions that cause ER stress helping cells manage misfolded proteins.
Biological function summary	HERPUD1 helps maintain cellular homeostasis during periods of ER stress by facilitating the degradation of misfolded proteins. It forms part of a larger complex in the ER-associated degradation (ERAD) pathway which targets these proteins for retrotranslocation and subsequent destruction by the proteasome. HERPUD1 therefore plays a vital role in mitigating the buildup of potentially harmful proteins within the cell.
Pathways	HERPUD1 is integral to the unfolded protein response (UPR) and the ERAD pathway. In the UPR HERPUD1 is involved in signaling mechanisms that help restore normal ER function. It interacts with other proteins such as SEL1L and DERLIN-1 within the ERAD pathway to ensure the proper disposal of misfolded proteins preventing cellular damage.
Associated diseases and disorders	HERPUD1 is connected with neurodegenerative diseases and cardiac disorders. Its dysfunction or dysregulation can lead to the accumulation of misfolded proteins contributing to conditions like Alzheimer's disease. Moreover HERPUD1's relationship with proteins such as ubiquitin suggests its involvement in cardiac stress responses which can be significant in heart failure. HERPUD1's functions and interactions underline its importance in cellular stress responses and associated disease states.

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.

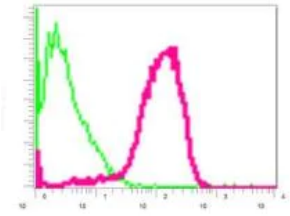
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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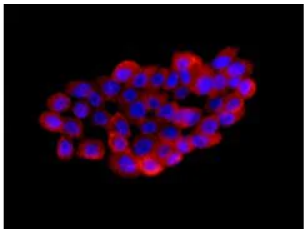
4 product images



Flow Cytometry (Intracellular) - Anti-HERPUD1 antibody [EPR9649] (ab150424)

HERPUD1 Flow Cytometry (Intracellular) staining using rabbit Anti-HERPUD1 antibody

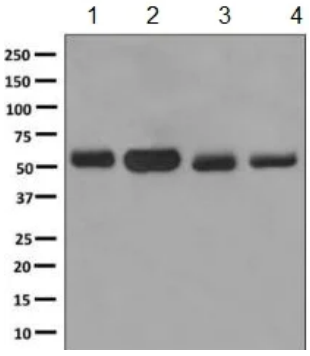
Intracellular flow cytometric analysis of permeabilized HepG2 cells labelling HERPUD1 with ab150424 at 1/10 dilution (red) or a rabbit IgG (negative).



Immunocytochemistry/ Immunofluorescence - Anti-HERPUD1 antibody [EPR9649] (ab150424)

HERPUD1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-HERPUD1 antibody

Immunofluorescent analysis of BxPC-3 cells labelling HERPUD1 with ab150424 at 1/100 dilution.



Western blot - Anti-HERPUD1 antibody [EPR9649] (ab150424)

HERPUD1 Western blot staining using rabbit Anti-HERPUD1 antibody

All lanes:
Western blot - Anti-HERPUD1 antibody [EPR9649] (ab150424) at 1/1000 dilution

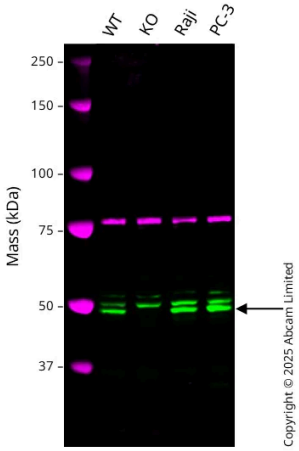
Lane 1:
BxPC-3 cell lysate at 10 µg

Lane 2:
HepG2 cell lysate at 10 µg

Lane 3:
SH-SY5Y cell lysate at 10 µg

Lane 4:
293T (Human embryonic kidney epithelial cell) cell lysate at 10 µg

Predicted band size: 44 kDa



Western blot - Anti-HERPUD1 antibody [EPR9649] (ab150424)

HERPUD1 Western blot staining using rabbit Anti-HERPUD1 antibody

Western blot: Anti-HERPUD1 antibody [EPR9649] ab150424 staining at 1/1000 dilution, shown in green; Mouse anti-CANX (ab238078) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 49 kDa in Wild-type A549 cell lysates with no signal observed at this size in HERPUD1 knockout A549 cell line. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-HERPUD1 antibody [EPR9649] (ab150424) at 1/1000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
HERPUD1 knockout A549 at 20 µg

Lane 3:
Raji at 20 µg

Lane 4:
PC-3 at 20 µg

Secondary

Lanes 1 - 4:
Goat anti-Rabbit 800CW at 1/20000 dilution

Lanes 1 - 4:
Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 44 kDa

Observed band size: 49 kDa, 76 kDa

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