

Product datasheet

Anti-Ferritin antibody [EPR3004Y] ab75973

KO **VALIDATED** Recombinant **RabMAb**

★★★★★ 5 Abreviews 38 References 7 Images

Overview

Product name	Anti-Ferritin antibody [EPR3004Y]
Description	Rabbit monoclonal [EPR3004Y] to Ferritin
Host species	Rabbit
Specificity	In human, this antibody recognizes both, Ferritin heavy and light chains. In mouse and rat, it only recognizes Ferritin heavy chain.
Tested applications	Suitable for: ICC/IF, Flow Cyt, WB Unsuitable for: IHC-P
Species reactivity	Reacts with: Mouse, Rat, Human
Immunogen	Synthetic peptide within Human Ferritin aa 50-150. The exact sequence is proprietary. Database link: P02794
Positive control	WB: HEK293T, Jurkat, SH-SY-5Y, C6 and Raw264.7 cell lysates; Human and rat brain lysates ICC/IF: Jurkat cells Flow Cyt: SH-SY5Y cells
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p> <p>We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.</p> <p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and</p>

species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

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. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.01% Sodium azide Constituents: 49% PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR3004Y
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab75973** 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
ICC/IF		1/100.
Flow Cyt		1/50.
WB	★★★★★	1/1000 - 1/2000. Detects a band of approximately 19, 21 kDa (predicted molecular weight: 21,19 kDa).

Application notes Is unsuitable for IHC-P.

Target

Function Stores iron in a soluble, non-toxic, readily available form. Important for iron homeostasis. Has ferroxidase activity. Iron is taken up in the ferrous form and deposited as ferric hydroxides after

oxidation. Also plays a role in delivery of iron to cells. Mediates iron uptake in capsule cells of the developing kidney.

Sequence similarities

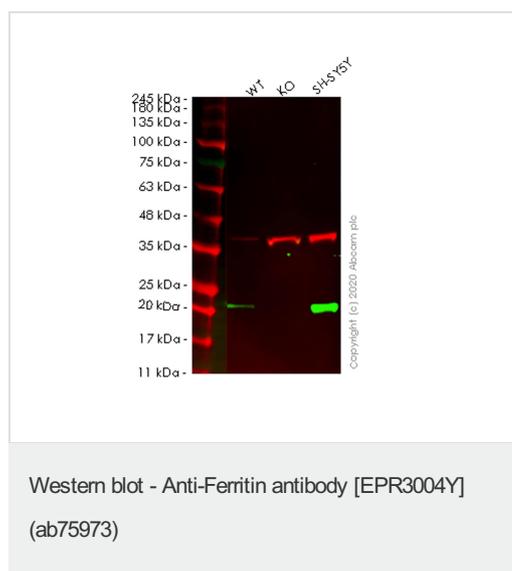
Belongs to the ferritin family.

Contains 1 ferritin-like diiron domain.

Form

Subunit structure: Oligomer of 24 subunits. There are two types of subunits: L (light) chain and H (heavy) chain. The major chain can be light or heavy, depending on the species and tissue type. In the human liver, the heavy chain is predominant. The functional molecule forms a roughly spherical shell with a diameter of 12 nm and contains a central cavity into which the insoluble mineral iron core is deposited.

Images



All lanes : Anti-Ferritin antibody [EPR3004Y] (ab75973) at 1/1000 dilution

Lane 1 : Wild-type HEK293T cell lysate

Lane 2 : FTH1 knockout HEK293T cell lysate

Lane 3 : SH-SY5Y cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 21,19 kDa

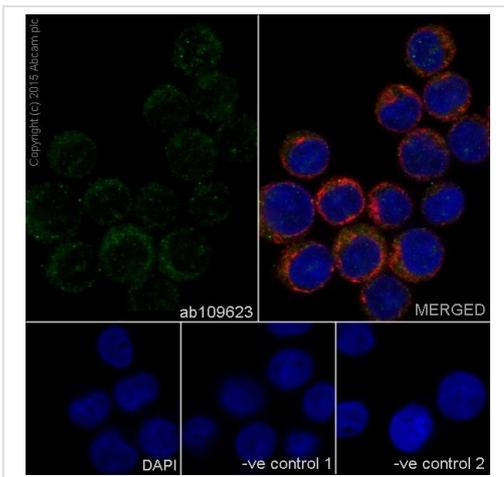
Observed band size: 21 kDa

[why is the actual band size different from the predicted?](#)

Lanes 1-3: Merged signal (red and green). Green - ab75973 observed at 21 kDa. Red - loading control [ab8245](#) observed at 36 kDa.

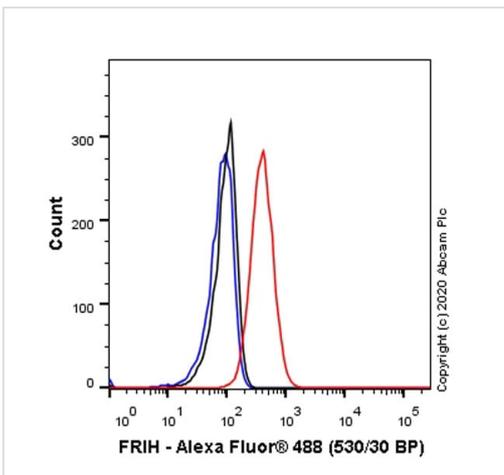
ab75973 Anti-Ferritin antibody [EPR3004Y] was shown to specifically react with Ferritin in wild-type HEK293T cells. Loss of signal was observed when knockout cell line [ab266581](#) (knockout cell lysate [ab256924](#)) was used. Wild-type and Ferritin knockout samples were subjected to SDS-PAGE. ab75973 and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated at room temperature for 2.5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed

([ab216776](#)) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



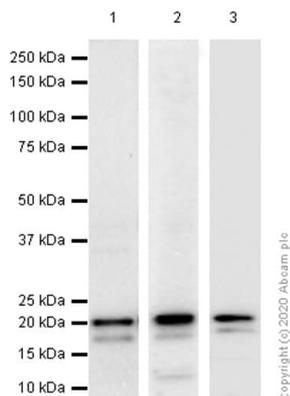
Immunocytochemistry/ Immunofluorescence - Anti-Ferritin antibody [EPR3004Y] (ab75973)

Immunofluorescence staining of Jurkat cells with purified ab75973 at a working dilution of 1/100, counter-stained with DAPI. The secondary antibody was Alexa Fluor[®] 488 goat anti-rabbit ([ab150077](#)), used at a dilution of 1/1000. [ab7291](#), a mouse anti-tubulin antibody (1/1000), was used to stain tubulin along with [ab150120](#) (Alexa Fluor[®] 594 goat anti-mouse, 1/1000), shown in the top right hand panel. The cells were fixed in 100% methanol and permeabilized using 0.1% Triton X 100. The negative controls are shown in bottom middle and right hand panels - for negative control 1, purified ab75973 was used at a dilution of 1/500 followed by an Alexa Fluor[®] 594 goat anti-mouse antibody ([ab150120](#)) at a dilution of 1/500. For negative control 2, [ab7291](#) (mouse anti-tubulin) was used at a dilution of 1/500 followed by an Alexa Fluor[®] 488 goat anti-rabbit antibody ([ab150077](#)) at a dilution of 1/400.



Flow Cytometry - Anti-Ferritin antibody [EPR3004Y] (ab75973)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized SH-SY5Y (Human neuroblastoma epithelial cell) cells labelling Ferritin with ab75973 at 1/50 dilution (1µg) (Red) compared with a Rabbit monoclonal IgG ([ab172730](#)) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat anti rabbit IgG (Alexa Fluor[®] 488, [ab150077](#)) at 1/2000 dilution was used as the secondary antibody.



Western blot - Anti-Ferritin antibody [EPR3004Y] (ab75973)

All lanes : Anti-Ferritin antibody [EPR3004Y] (ab75973) at 1/2000 dilution

Lane 1 : Jurkat (Human T cell leukemia T lymphocyte) whole cell lysates

Lane 2 : HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates

Lane 3 : C6 (Rat glial tumor glial cell) whole cell lysates

Lysates/proteins at 20 µg per lane.

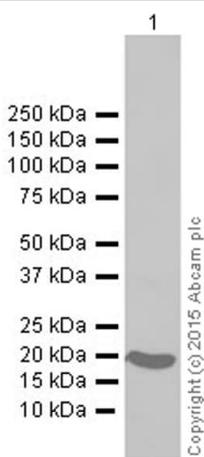
Secondary

All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/20000 dilution

Predicted band size: 21,19 kDa

Observed MW: 21 kDa

Blocking/diluting buffer and concentration: 5% NFDm/TBST



Western blot - Anti-Ferritin antibody [EPR3004Y] (ab75973)

Anti-Ferritin antibody [EPR3004Y] (ab75973) at 1/10000 dilution (purified) + Raw264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Secondary

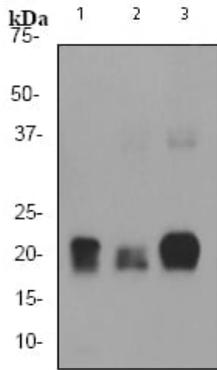
Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 21,19 kDa

Observed band size: 21 kDa [why is the actual band size different from the predicted?](#)

Blocking buffer: 5% NFDm/TBST

Dilution buffer: 5% NFDm/TBST



Western blot - Anti-Ferritin antibody [EPR3004Y]
(ab75973)

All lanes : Anti-Ferritin antibody [EPR3004Y] (ab75973) at 1/2000 dilution (Unpurified)

Lane 1 : Jurkat (Human T cell leukemia cell line from peripheral blood) cell lysate

Lane 2 : SH-SY5Y (Human neuroblastoma cell line from bone marrow) cell lysate

Lane 3 : Human brain lysates

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 21,19 kDa

Observed band size: 19,21 kDa [why is the actual band size different from the predicted?](#)

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Ferritin antibody [EPR3004Y] (ab75973)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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