abcam

ab271865

Anti-Calreticulin antibody [EPR3924] - BSA and Azide free

Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865) is a rabbit recombinant monoclonal antibody for **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF**. Suitable for **African green monkey, Human, Mouse**.

- KO validated for confirmed specificity
- BSA, sodium azide, and glycerol-free for easy conjugation
- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR3924
Purification technique	Affinity purification Protein A
Concentration	1.016 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Mouse, African green monkey, Human
Dilution info	-
Notes	-

Predicted

Species	Rat, Monkey
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	The use of a HRP/AP polymerized secondary antibody is recommended for enhanced staining.

Expected

Species	African green monkey, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Monkey
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	We recommend 100% methanol as fixation agent as paraformaldehyde (PFA) results in nonspecific staining in some cell lines.

Expected

Species	Mouse, African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Monkey
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

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

Expected

Species	Mouse, African green monkey
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Monkey
Dilution info	-

Notes	-

Target data

See full target information CALR

Function	Calcium-binding chaperone that promotes folding, oligomeric assembly and quality control in the endoplasmic reticulum (ER) via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglucosylated glycoproteins that are synthesized in the ER (PubMed:7876246). Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export (PubMed:11149926). Involved in maternal gene expression regulation. May participate in oocyte maturation via the regulation of calcium homeostasis (By similarity). Present in the cortical granules of non-activated oocytes, is exocytosed during the cortical reaction in response to oocyte activation and might participate in the block to polyspermy (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

What is this antibody validated in?
Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in African green monkey, Human, Mouse samples.

What is the molecular weight of Calreticulin?
Anti-Calreticulin [EPR3924] - BSA and Azide free (ab271865) specifically detects a band for Calreticulin (UniProt: P27797) at a molecular weight of 48kDa.

Specificity confirmed
The specificity of Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865) has been confirmed by Immunocytochemistry/ Immunofluorescence testing in CALR Knockout HAP1 cell line.

Other related products
We have a range of other formats of antibody clone [EPR3924] also available for your convenience: ab92516, HRP -

ab195511, Alexa Fluor® 488 - ab196158, Alexa Fluor® 647 - ab196159, PE - ab209577, Alexa Fluor® 405 - ab210431, Carrier free - ab211962, Carrier free - ab271865, Alexa Fluor® 555 - ab275117, Alexa Fluor® 594 - ab275343

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

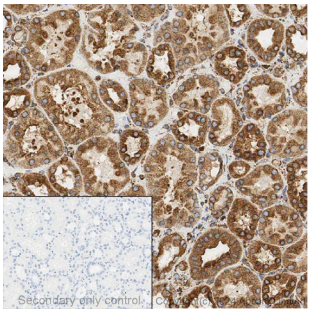
We do not recommend this combination. It is not covered by our product promise.

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.

15 product images



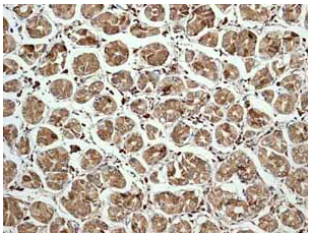
Immunohistochemistry - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

Immunohistochemical analysis of formalin fixed paraffin embedded human kidney labelling Calreticulin with ab92516 at a concentration of 0.004 µg/ml. The immunostaining was performed on a Ventana DISCOVERY ULTRA (Roche Tissue Diagnostics) instrument with a OptiView DAB IHC Detection Kit. Heat mediated antigen retrieval was performed with DISCOVERY cell conditioning solution (CC1) 100°C, pH 8.5 for 32 mins.

ab92516 anti-Calreticulin [EPR3924] was incubated for 16mins at 37°C. Sections were counterstained with Hematoxylin II. Image inset shows absence of staining in secondary antibody only control.

Customers are encouraged to optimise antigen retrieval conditions, antibody concentration, incubation times and temperature for best results in their own IHC assay workflow (automated and manual)

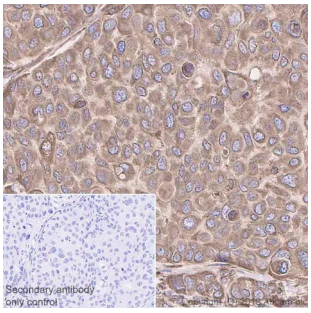


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Formalin-fixed, paraffin-embedded normal human stomach tissue stained for Calreticulin using ab92516 at 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).



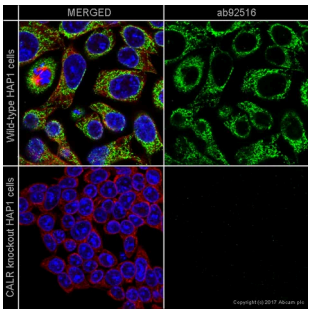
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Immunohistochemical analysis of paraffin-embedded Human breast carcinoma tissue labeling Calreticulin with ab92516, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining human breast carcinoma.The section was incubated with ab92516 for 30 mins at room

temperature. Counterstained with Hematoxylin. Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).



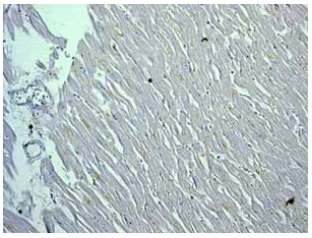
Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Calreticulin antibody

ab92516 staining Calreticulin in wild-type HAP1 cells (top panel) and CALR knockout HAP1 cells (bottom panel). The cells were fixed with 100% methanol (5min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab92516 at 1/500 and ab195889 at 1/250 dilution (shown in pseudocolour red) overnight at +4°C, followed by a further incubation at room temperature for 1h with a goat secondary antibody to Rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Alexa Fluor® 488 (ab196158) and Alexa Fluor® 647 (ab196159) conjugated versions are available for this clone.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

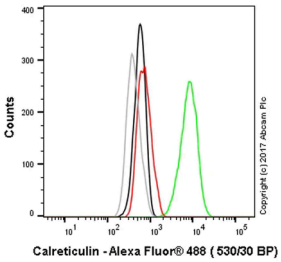


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

ab92516 showing negative staining in Normal human heart tissue.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).



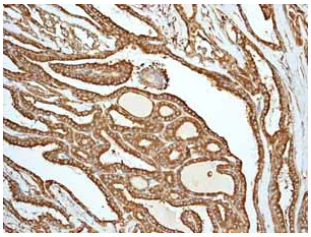
Flow Cytometry (Intracellular) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

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

Overlay histogram showing HAP1 wildtype (green line) and HAP1-CALR knockout cells (red line) stained with ab92516. The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab92516, 1µg/ml) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) preadsorbed (ab150081) at 1/2000 dilution for 30 min at 22°C. A rabbit IgG isotype control

antibody (ab172730) was used at the same concentration and conditions as the primary antibody (HAP1 wildtype - black line, HAP1-CALR knockout - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity). Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.
Alexa Fluor® 488 (ab196158) and Alexa Fluor® 647 (ab196159) conjugated versions are available for this clone.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

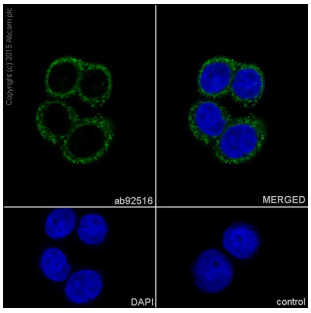


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Formalin-fixed, paraffin-embedded Papillary carcinoma of human thyroid gland tissue.stained for Calreticulin using ab92516 at 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

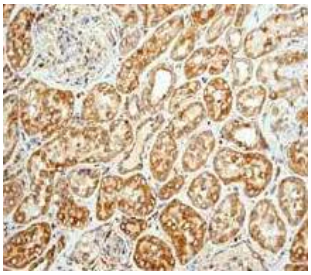


Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Calreticulin antibody

Immunocytochemistry/Immunofluorescence analysis of HT-29 (human colorectal adenocarcinoma) labelling Calreticulin with purified ab92516 at 1/500. Cells were fixed with 100% methanol. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody (ab150077). Nuclei counterstained with DAPI (blue).
Control: PBS only

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

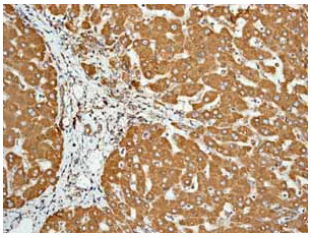


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

ab92516, at 1/250 dilution, staining Calreticulin in paraffin embedded Human kidney tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

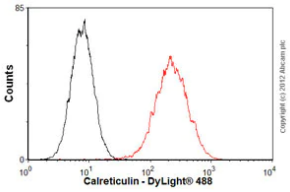


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Formalin-fixed, paraffin-embedded normal human liver tissue stained for Calreticulin using ab92516 at 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

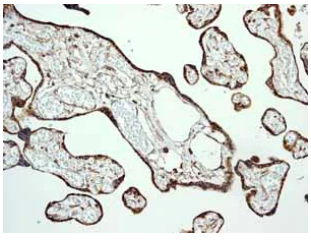
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).



Flow Cytometry (Intracellular) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

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

Overlay histogram showing HeLa cells stained with ab92516 (red line). The cells were fixed with 80% methanol (5 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 (ab92516, 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 data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

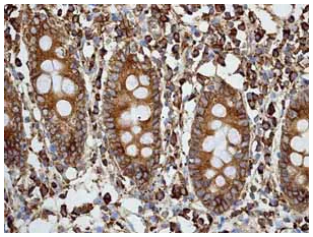


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Formalin-fixed, paraffin-embedded normal human placenta tissue stained for Calreticulin using ab92516 at 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

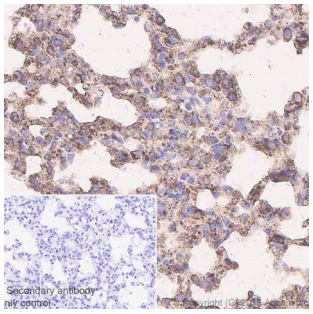


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Formalin-fixed, paraffin-embedded normal human colon tissue stained for Calreticulin using ab92516 at 1/250 dilution in immunohistochemical analysis.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

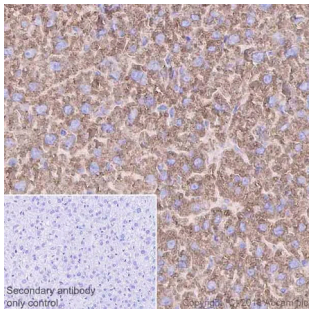


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Immunohistochemical analysis of paraffin-embedded Rat lung tissue labeling Calreticulin with ab92516, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on rat lung.The section was incubated with ab92516 for 30 mins at room temperature. Counterstained with Hematoxylin. Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [EPR3924] - BSA and Azide free (ab271865)

Calreticulin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Calreticulin antibody

Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Calreticulin with ab92516, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Cytoplasmic staining on mouse liver.The section was incubated with ab92516 for 30 mins at room temperature. Counterstained with Hematoxylin. Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab92516).

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