abcam

ab203439

Alexa Fluor® 594 Anti-Calnexin antibody [EPR3633(2)] - ER Membrane Marker

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 594
Excitation/Emission	Ex: 590nm, Em: 617nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR3633(2)
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information CANX

Function	Calcium-binding protein that interacts with newly synthesized monoglucosylated glycoproteins in the endoplasmic reticulum. It may act in assisting protein assembly and/or in the retention within the ER of unassembled protein subunits. It

seems to play a major role in the quality control apparatus of the ER by the retention of incorrectly folded proteins. Associated with partial T-cell antigen receptor complexes that escape the ER of immature thymocytes, it may function as a signaling complex regulating thymocyte maturation. Additionally it may play a role in receptor-mediated endocytosis at the synapse.

Storage

Shipped at conditions	Blue Ice
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, Store in the dark

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.

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Supplementary info

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

Activity summary	Calnexin also known as Canx is a type I integral membrane protein of the endoplasmic reticulum (ER) involved in the process of protein folding. This chaperone protein has an approximate molecular weight of 90 kDa and is known for its role in the quality control of glycoproteins. Calnexin is expressed in the ER of cells where it interacts with nascent polypeptides to ensure proper folding and assembly contributing to cellular homeostasis. It exhibits its function through its lectin-like domain that binds to sugar moieties on glycoproteins.
Biological function summary	Calnexin facilitates the proper folding of newly synthesized proteins by forming a complex with another chaperone protein called ERp57. This interaction helps in creating the correct disulfide bonds in glycoproteins which is essential for their stability and functionality. The complex often referred to as the calnexin cycle is critical in preventing the aggregation and misfolding of proteins within the ER. This process ensures that only correctly folded proteins proceed to the Golgi apparatus for further processing and transport.
Pathways	Calnexin plays an important role in the ER-associated degradation (ERAD) pathway and the unfolded protein response (UPR). In these pathways calnexin ensures that misfolded proteins are retained in the ER or targeted for degradation preventing cellular stress. Calnexin is associated with proteins such as calreticulin another chaperone protein with a similar function in the ER. Together they maintain proteostasis within cells and protect against the accumulation of improperly folded proteins.
Associated diseases and disorders	Calnexin is linked to several conditions including cystic fibrosis and certain neurodegenerative diseases. In cystic fibrosis the misfolding and subsequent degradation of the CFTR protein are associated with calnexin's role in the ERAD pathway. Similarly in neurodegenerative diseases such as Alzheimer's disrupted protein folding and aggregation are linked to ER stress where calnexin and other chaperone proteins like BiP play a pivotal role in managing protein misfolding. Understanding calnexin's role in these disorders can contribute to developing strategies to mitigate faulty protein folding and its pathological consequences.

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.

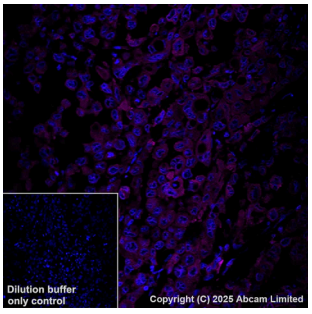
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 594 Anti-Calnexin antibody [EPR3633(2)] - ER Membrane Marker (ab203439)

Calnexin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human pancreas using rabbit Anti-Calnexin antibody

Immunohistochemical analysis of paraffin-embedded Human gastric cancer tissue labeling Calnexin with ab203439 at 1/50 dilution.

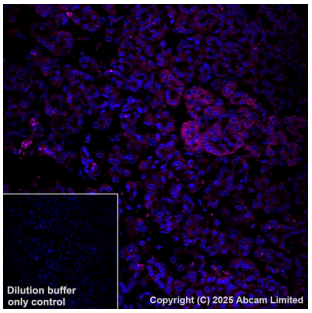
Positive staining on human gastric cancer.
The primary antibody was incubated for 60 mins at room temperature (shown in magenta). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Counterstained with DAPI.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins

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Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Alexa Fluor® 594 Anti-Calnexin antibody [EPR3633(2)] - ER Membrane Marker (ab203439)

Calnexin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human pancreas using rabbit Anti-Calnexin antibody

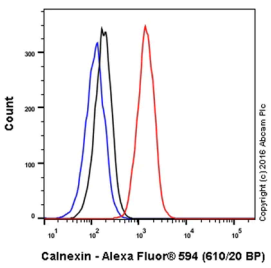
Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling Calnexin with ab203439 at 1/50 dilution.

Positive staining on human pancreas.
The primary antibody was incubated for 60 mins at room temperature (shown in magenta). Nuclear DNA was labeled with DAPI (shown in blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Counterstained with DAPI.

Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 40 mins



Flow Cytometry (Intracellular) - Alexa Fluor® 594 Anti-Calnexin antibody [EPR3633(2)] - ER Membrane Marker (ab203439)

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

Overlay histogram showing HeLa cells stained with ab203439 (red line). The cells were fixed with 4% formaldehyde and then permeabilized with 90% methanol at -20°C 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 (ab203439, 1/50 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 594 (ab208568) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 40 mW Red laser (640nm) and 610/20 bandpass filter.

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