


Product datasheet

Anti-Calreticulin antibody [FMC 75] ab22683

★★★★★ [22 Abreviews](#) [71 References](#) [3 Images](#)

Overview

Product name	Anti-Calreticulin antibody [FMC 75]
Description	Mouse monoclonal [FMC 75] to Calreticulin
Host species	Mouse
Tested applications	Suitable for: Flow Cyt (Intra), ICC/IF, IHC-P
Species reactivity	Reacts with: Human Predicted to work with: Chinese hamster 
Immunogen	Fusion protein corresponding to Calreticulin. Calreticulin-maltose binding fusion protein. Database link: P27797
Positive control	WB: HeLa whole cell lysate. IHC-P: Human placenta tissue. ICC/IF: HeLa cell lysate. Flow: HeLa cells.
General notes	<p>This product was changed from ascites to tissue culture supernatant on 22nd May 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>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, along with publications, customer reviews and Q&As</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	Preservative: 0.09% Sodium azide Constituent: PBS
Purity	Protein G purified
Purification notes	Purified from TCS.
Clonality	Monoclonal

Clone number	FMC 75
Isotype	IgG1
Light chain type	kappa

Applications

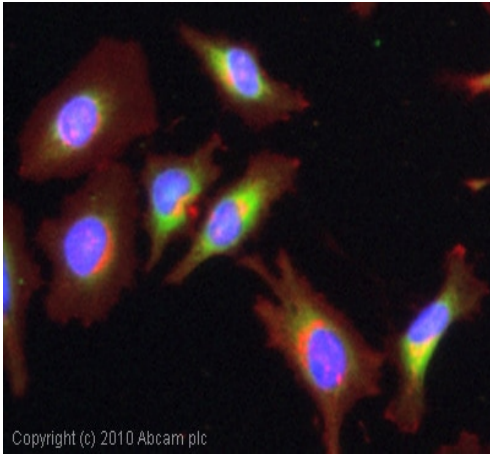
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab22683 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration. (Additional resource: PMID - 18689689) ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF	★★★★★ (10)	Use at an assay dependent concentration. Fix and permeabilize cells prior to staining.
IHC-P	★★★★★ (2)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Target

Function	Molecular calcium-binding chaperone promoting folding, oligomeric assembly and quality control in the ER via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglucosylated glycoproteins that are synthesized in the ER. Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export.
Sequence similarities	Belongs to the calreticulin family.
Domain	Can be divided into a N-terminal globular domain, a proline-rich P-domain forming an elongated arm-like structure and a C-terminal acidic domain. The P-domain binds one molecule of calcium with high affinity, whereas the acidic C-domain binds multiple calcium ions with low affinity. The interaction with glycans occurs through a binding site in the globular lectin domain. The zinc binding sites are localized to the N-domain. Associates with PDIA3 through the tip of the extended arm formed by the P-domain.
Cellular localization	Endoplasmic reticulum lumen. Cytoplasm > cytosol. Secreted > extracellular space > extracellular matrix. Cell surface. Also found in cell surface (T cells), cytosol and extracellular matrix. Associated with the lytic granules in the cytolytic T-lymphocytes.

Images

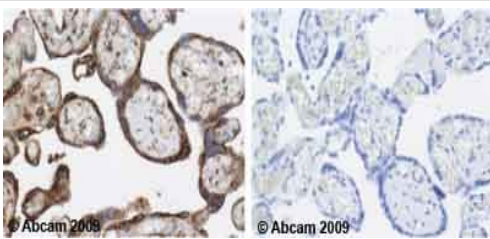


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Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody [FMC 75] (ab22683)

ICC/IF image of ab22683 stained HeLa cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab22683, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

This image was generated using the ascites version of the product.



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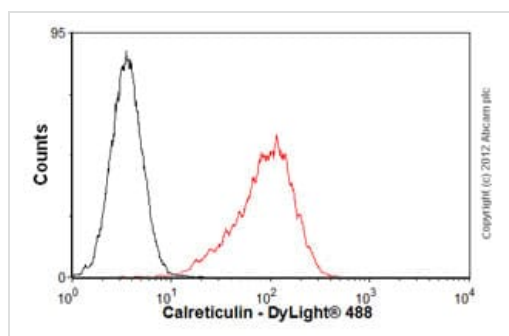
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Calreticulin antibody [FMC 75] (ab22683)

Ab22683 staining human placenta. Staining is localised to the cytoplasm.

Left panel: with primary antibody at 1 µg/ml. Right panel: isotype control.

Sections were stained using an automated system DAKO Autostainer Plus, at room temperature. Sections were rehydrated and antigen retrieved with the Dako 3-in-1 AR buffer citrate pH 6.0 in a DAKO PT Link. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 minutes. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS), then incubated with primary antibody for 20 minutes, and detected with Dako Envision Flex amplification kit for 30 minutes. Colorimetric detection was completed with diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that for manual staining we recommend to optimize the primary antibody concentration and incubation time (overnight incubation), and amplification may be required.

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Flow Cytometry (Intracellular) - Anti-Calreticulin antibody [FMC 75] (ab22683)

Overlay histogram showing HeLa cells stained with ab22683 (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 (ab22683, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) ([ab96879](#)) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] ([ab91353](#), 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

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