

## Product datasheet

### Anti-Calreticulin antibody - ER Marker ab2907

★★★★★ [16 Abreviews](#) [229 References](#) [10 Images](#)

#### Overview

<b>Product name</b>	Anti-Calreticulin antibody - ER Marker
<b>Description</b>	Rabbit polyclonal to Calreticulin - ER Marker
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Recombinant full length protein corresponding to Human Calreticulin.
<b>Positive control</b>	WB: HL-60, LNCaP, HeLa and MCF-7 cell lysates; Mouse and rat liver tissue lysates; Mouse skeletal muscle whole cell lysate. ICC/IF: A431, HeLa, U2OS, HepG2 and HMVEC cells.
<b>General notes</b>	<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&amp;As</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	Preservative: 0.05% Sodium azide
<b>Purity</b>	Whole antiserum
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

#### Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab2907 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	★★★★★ (8)	Use at an assay dependent concentration.
WB	★★★★★ (4)	1/1000.

## 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.

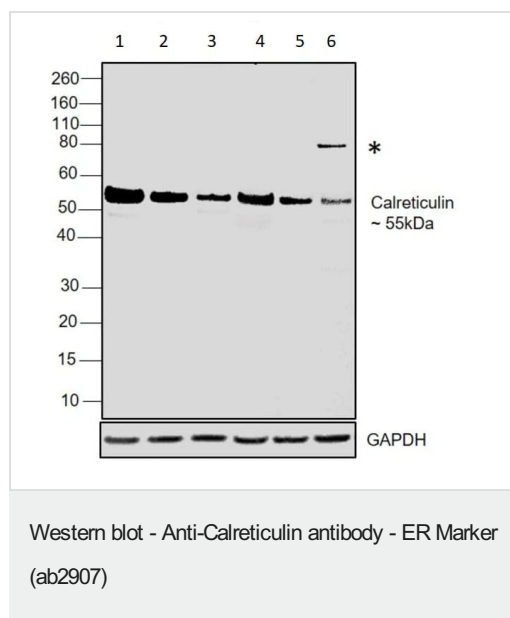
### Domain

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



**All lanes :** Anti-Calreticulin antibody - ER Marker (ab2907) at 1/1000 dilution

**Lane 1 :** HL-60 cell lysate

**Lane 2 :** LNCaP cell lysate

**Lane 3 :** HeLa cell lysate

**Lane 4 :** MCF-7 cell lysate

**Lane 5 :** Mouse liver tissue lysate

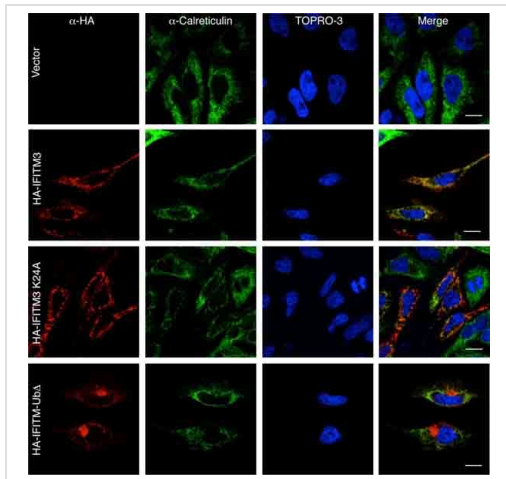
**Lane 6 :** Rat liver tissue lysate

Lysates/proteins at 30 µg per lane.

### Secondary

**All lanes :** Goat anti-Rabbit IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP at 1/4000 dilution

**Observed band size:** 55 kDa



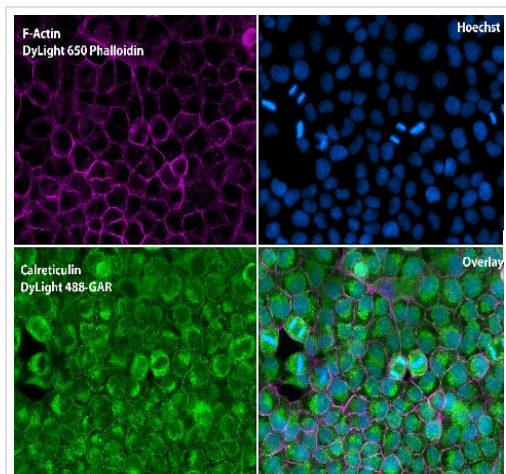
Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

Image from Yount JS et al, J Biol Chem. 2012 Jun 1;287(23):19631-41. Epub 2012 Apr 17, Fig 3. DOI 10.1074/jbc.M112.362095 June 1, 2012 The Journal of Biological Chemistry, 287, 19631-19641.

ab2907 used at a 1/1000 dilution staining Calreticulin in HeLa cells by Immunocytochemistry/ Immunofluorescence.

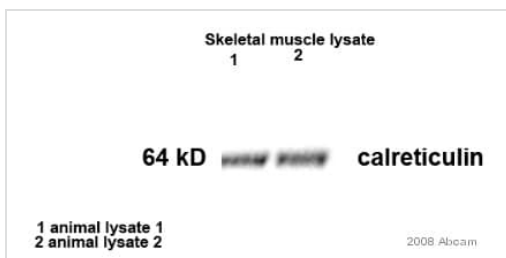
HeLa cells were transfected overnight with empty vector or plasmids encoding the indicated IFITM3 constructs.

Immunofluorescence with α-HA antibodies allowed IFITM3 visualization, and α-calreticulin staining allowed visualization of the ER. TOPRO-3 was used to visualize nuclei. Scale bars indicate 10 μm. Ub<sup>?</sup> indicates mutation of Lys-24, Lys-83, Lys-88, and Lys-104 to alanine.



Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

Immunocytochemistry/Immunofluorescence analysis of Calreticulin (green) in A431 cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in PBS for 10 minutes at room temperature and blocked with 2% BSA in PBS + 0.1% Triton X-100 for 30 minutes at room temperature. Cells were incubated with ab2907 (1:75) for at least 1 hour at room temperature, washed with PBS, and incubated with DyLight 488 goat anti-rabbit IgG secondary antibody (1:250) for 30 minutes at room temperature. Actin was stained with DyLight 650 Phalloidin (1:120) and nuclei (blue) were stained with Hoechst (1 μg/ml) for 30 minutes. Images were taken at 20X magnification.



Western blot - Anti-Calreticulin antibody - ER Marker (ab2907)

This image is courtesy of an anonymous Abreview

**All lanes** : Anti-Calreticulin antibody - ER Marker (ab2907) at 1/1000 dilution

**All lanes** : Whole cell lysate prepared from mouse skeletal muscle

Lysates/proteins at 30 μg per lane.

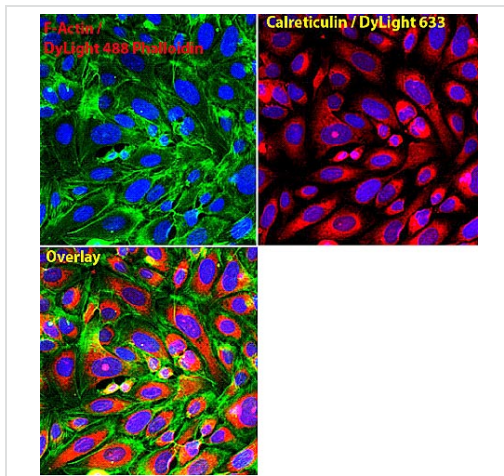
### Secondary

**All lanes** : HRP-conjugated mouse polyclonal to rabbit Ig at 1/10000 dilution

Developed using the ECL technique.

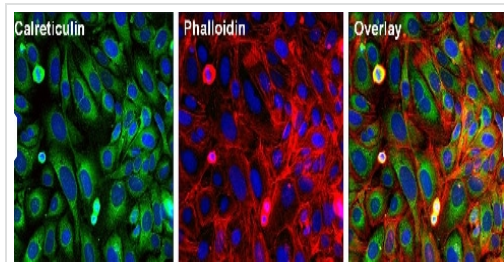
Performed under reducing conditions.

**Exposure time:** 3 seconds



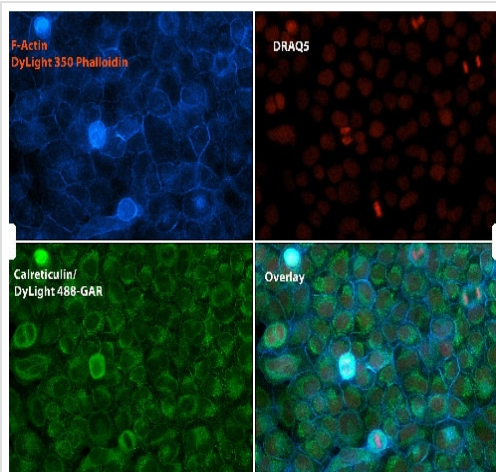
Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

Immunocytochemistry/Immunofluorescence analysis of Calreticulin (red) in U2OS cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in PBS for 10 minutes at room temperature and blocked with 2% BSA in PBS + 0.1% Triton X-100 for 30 minutes at room temperature. Cells were incubated with ab2907 (1:75) for at least 1 hour at room temperature, washed with PBS, and incubated with DyLight 633 goat anti-rabbit IgG secondary antibody (1:250) for 30 minutes at room temperature. Actin was stained with DyLight 488 Phalloidin (1:300) and nuclei (blue) were stained with Hoechst (1 $\mu$ g/ml) for 30 minutes. Images were taken at 20X magnification.



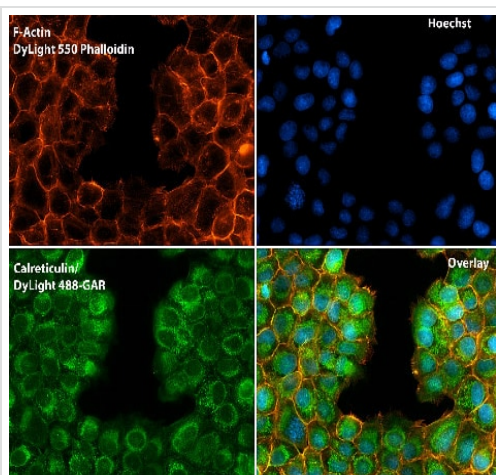
Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

Immunocytochemistry/Immunofluorescence analysis of Calreticulin (green) U2OS cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in PBS for 10 minutes at room temperature and blocked with 2% BSA in PBS 0.1% triton-X for 30 minutes at room temperature. Cells were incubated with ab2907 (1:50) for at least 1 hour at room temperature. Cells were washed with PBS and incubated with DyLight 488 goat-anti-rabbit IgG secondary antibody (1:250) for 30 minutes at room temperature. Actin filaments (red) were stained with DyLight 554-Phalloidin (1:300) in PBS and incubated for 30 minutes. Nuclei (blue) were stained with Hoechst 33342 dye (1 $\mu$ g/mL). Images were taken at 20X magnification.



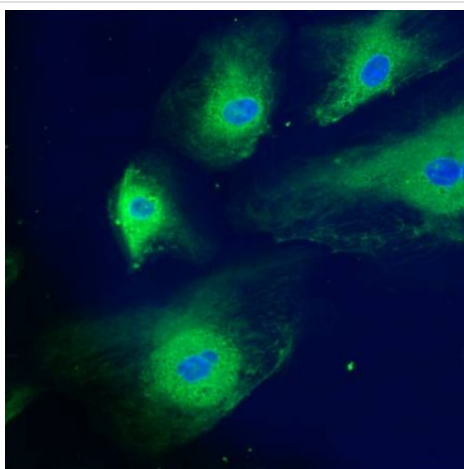
Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

Immunocytochemistry/Immunofluorescence analysis of Calreticulin (green) in A431 cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in PBS for 10 minutes at room temperature and blocked with 2% BSA in PBS + 0.1% Triton X-100 for 30 minutes at room temperature. Cells were incubated with ab2907 (1:75) for at least 1 hour at room temperature, washed with PBS, and incubated with Dylight 488 goat anti-rabbit IgG secondary antibody (1:250) for 30 minutes at room temperature. Actin was stained with Dylight 350 Phalloidin (1:120) and nuclei (red) were stained with DRAQ5 (1ug/ml) for 30 minutes. Images were taken at 20X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

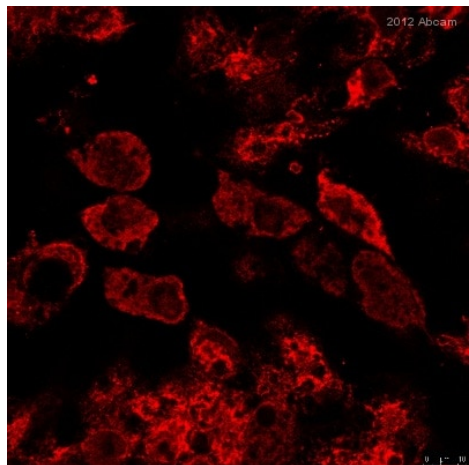
Immunocytochemistry/Immunofluorescence analysis of Calreticulin (green) in A431 cells. Formalin fixed cells were permeabilized with 0.1% Triton X-100 in PBS for 10 minutes at room temperature and blocked with 2% BSA in PBS + 0.1% Triton X-100 for 30 minutes at room temperature. Cells were incubated with ab2907 (1:75) for at least 1 hour at room temperature, washed with PBS, and incubated with DyLight 488 goat anti-rabbit IgG secondary antibody (1:250) for 30 minutes at room temperature. Actin was stained with DyLight 550 Phalloidin (1:120) and nuclei (blue) were stained with Hoechst (1ug/ml) for 30 minutes. Images were taken at 20X magnification.



Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

Immunocytochemistry/Immunofluorescence analysis of HMVEC cells labelling Calreticulin using ab2907.





Immunocytochemistry/ Immunofluorescence - Anti-Calreticulin antibody - ER Marker (ab2907)

This image is courtesy of an anonymous Abreview

Immunofluorescence analysis of HepG2 cells, staining Calreticulin with ab2907.

Cells were fixed with paraformaldehyde, permeabilized with 0.1% Saponin and blocked with 10% serum for 1 hour at 20°C. Samples were incubated with primary antibody (1/200 in PBS + 0.1% saponin) for 1 hour at 20°C. An AlexaFluor®647-conjugated donkey anti-rabbit polyclonal IgG (1/400) was used as the secondary antibody.

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