**Product datasheet**

**Anti-Calreticulin antibody ab2907**

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**Overview**

- **Product name**: Anti-Calreticulin antibody
- **Description**: Rabbit polyclonal to Calreticulin
- **Host species**: Rabbit
- **Tested applications**: Suitable for: ICC, ICC/IF, ELISA, IP, WB, IHC-P, Flow Cyt
- **Species reactivity**: Reacts with: Mouse, Rat, Rabbit, Dog, Human, Drosophila melanogaster, Non human primates
- **Immunogen**: Other Immunogen Type corresponding to Human Calreticulin. Recombinant human calreticulin protein produced in the Baculovirus insect cell system.
- **Positive control**: IHC: Rat brain cortex tissue; ICC: COS7 cells transfected with GFP-MAR2 or murine bone marrow macrophages infected with bacteria and fixed with 3% paraformaldehyde
- **General notes**

**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 or -80°C. Avoid freeze / thaw cycle.
- **Storage buffer**: Preservative: 0.05% Sodium azide
- **Purity**: Whole antiserum
- **Clonality**: Polyclonal
- **Isotype**: IgG

**Applications**

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.

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<tr>
<th>Application</th>
<th>Abreviews</th>
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<tbody>
<tr>
<td>ICC</td>
<td>⭐⭐⭐⭐</td>
<td>1/50 - 1/200.</td>
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**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.

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<tr>
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<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration. PubMed: 16943324</td>
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<td>ELISA</td>
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<td>IP</td>
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<td>WB</td>
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<td>IHC-P</td>
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<td>Use at an assay dependent concentration. PubMed: 20731657</td>
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<td>Flow Cyt</td>
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<td>Use at an assay dependent concentration. PubMed: 20388795 ab171870, Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.</td>
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**Target**

**Images**
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 (1µg/ml) for 30 minutes. Images were taken at 20X magnification.

All lanes: Anti-Calreticulin antibody (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

ab2907 staining calreticulin in mouse liver tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 15% serum for 60 minutes at 20°C; antigen retrieval was by heat mediation in Tris/EDTA pH 9. Samples were incubated with primary antibody (1/500 in TBS) for 18 hours at 20°C. An Alexa Fluor® 647-conjugated goat anti-rabbit IgG polyclonal (1/400) was used as the secondary antibody.
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 a-HA antibodies allowed IFITM3 visualization, and a-calreticulin staining allowed visualization of the ER. TOPRO-3 was used to visualize nuclei. Scale bars indicate 10 µm. Ub? indicates mutation of Lys-24, Lys-83, Lys-88, and Lys-104 to alanine.

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 (1µg/ml) for 30 minutes. Images were taken at 20X magnification.

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 (1µg/mL). Images were taken at 20X magnification.
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 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 (blue) were stained with Hoechst (1ug/ml) for 30 minutes. Images were taken at 20X magnification.

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