



# Calregulin Monoclonal Antibody

|                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>         | YP-Ab-00609                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Isotype</b>            | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Reactivity</b>         | Human;Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Applications</b>       | WB;IHC;IF;ELISA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Gene Name</b>          | CALR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Protein Name</b>       | Calreticulin                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Immunogen</b>          | Synthetic peptide corresponding to aa (EEEDVPGQAKDELG) of human Calreticulin, conjugated to KLH.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Specificity</b>        | Calregulin Monoclonal Antibody detects endogenous levels of Calregulin protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Formulation</b>        | Ascitic fluid containing 0.03% sodium azide,0.5% BSA, 50%glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>             | Monoclonal, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purification</b>       | Affinity purification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Dilution</b>           | Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/200 - 1/1000. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Concentration</b>      | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Purity</b>             | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Storage Stability</b>  | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>           | CALR; CRTG; Calreticulin; CRP55; Calregulin; Endoplasmic reticulum resident protein 60; ERp60; HACBP; grp60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Observed Band</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Cell Pathway</b>       | Endoplasmic reticulum lumen . Cytoplasm, cytosol . Secreted, extracellular space, extracellular matrix . Cell surface . Sarcoplasmic reticulum lumen . Cytoplasmic vesicle, secretory vesicle, Cortical granule . Cytolytic granule . Also found in cell surface (T cells), cytosol and extracellular matrix (PubMed:10358038). During oocyte maturation and after parthenogenetic activation accumulates in cortical granules. In pronuclear and early cleaved embryos localizes weakly to cytoplasm around nucleus and more strongly in the region near the cortex (By similarity). In cortical granules of non-activated oocytes, is exocytosed during the cortical reaction in response to oocyte activation (By similarity). . |
| <b>Tissue Specificity</b> | Brain,Cajal-Retzius cell,Colon carcinoma,Eye,Fetal brain cortex,Keratinocyte,Liver,Pancreas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Function</b>           | caution:Was originally (PubMed:2332496) thought to be the 52 kDa Ro autoantigen.,domain:Associates with PDIA3 through the tip of the extended arm formed by the P-domain.,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.,domain:The interaction with glycans occurs through a binding site in the globular lectin domain.,domain:The zinc binding sites are localized to the N-domain.,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

**Background**

Calreticulin is a multifunctional protein that acts as a major Ca(2+)-binding (storage) protein in the lumen of the endoplasmic reticulum. It is also found in the nucleus, suggesting that it may have a role in transcription regulation. Calreticulin binds to the synthetic peptide KLGFFKR, which is almost identical to an amino acid sequence in the DNA-binding domain of the superfamily of nuclear receptors. Calreticulin binds to antibodies in certain sera of systemic lupus and Sjogren patients which contain anti-Ro/SSA antibodies, it is highly conserved among species, and it is located in the endoplasmic and sarcoplasmic reticulum where it may bind calcium. The amino terminus of calreticulin interacts with the DNA-binding domain of the glucocorticoid receptor and prevents the receptor from binding to its specific glucocorticoid response element. Calreticulin can inhibit the binding of androgen receptor to its

**matters needing attention**

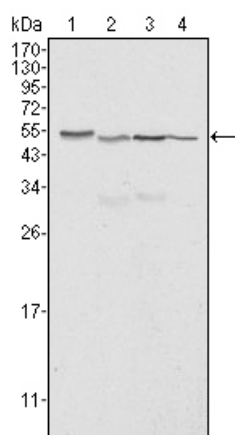
Avoid repeated freezing and thawing!

**Usage suggestions**

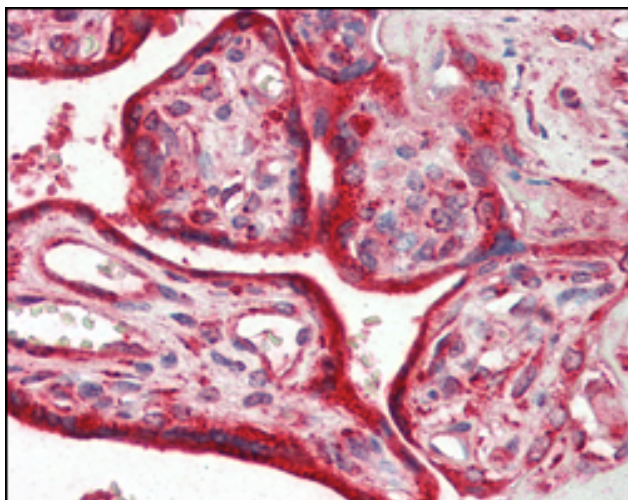
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



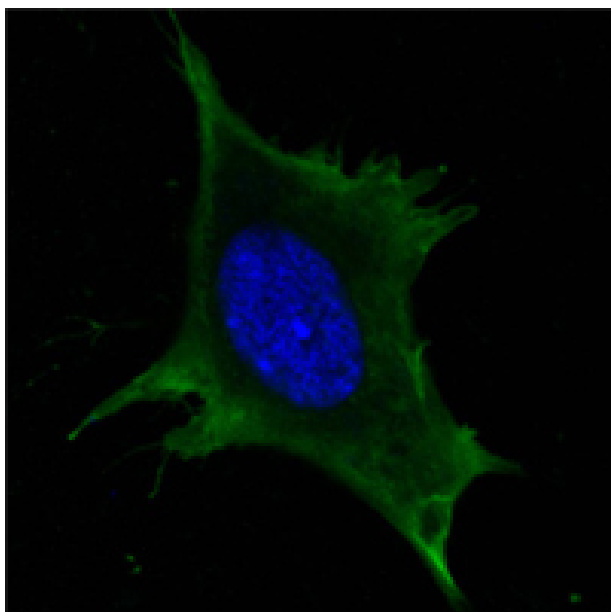
## Products Images



Western Blot analysis using Calregulin Monoclonal Antibody against HeLa (1), A549 (2), NTERA2 (3) and MCF-7 (4) cell lysate.



Immunohistochemistry analysis of paraffin-embedded human placenta tissues with AEC staining using Calregulin Monoclonal Antibody.



Confocal immunofluorescence analysis of 3T3-L1 cells using Calregulin Monoclonal Antibody (green). Blue: DRAQ5 fluorescent DNA dye.