

Calreticulin Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1147a

Product Information

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| Application | WB, E |
| Primary Accession | P27797 |
| Reactivity | Human |
| Host | Mouse |
| Clonality | Monoclonal |
| Clone Names | N/A |
| Calculated MW | 48142 |
| Description | <p>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 hormone-responsive DNA element and can inhibit androgen receptor and retinoic acid receptor transcriptional activities in vivo, as well as retinoic acid-induced neuronal differentiation. Thus, calreticulin can act as an important modulator of the regulation of gene transcription by nuclear hormone receptors. Systemic lupus erythematosus is associated with increased autoantibody titers against calreticulin but calreticulin is not a Ro/SS-A antigen. Earlier papers referred to calreticulin as an Ro/SS-A antigen but this was later disproven. Increased autoantibody titer against human calreticulin is found in infants with complete congenital heart block of both the IgG and IgM classes.</p> |
| Immunogen | Synthetic peptide corresponding to aa(E-E-E-D-V-P-G-Q-A-K-D-E-L-C)of human Calreticulin, conjugated to KLH. |
| Formulation | Rabbit anti-serum. |

Additional Information

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| Gene ID | 811 |
| Other Names | Calreticulin, CRP55, Calregulin, Endoplasmic reticulum resident protein 60, ERp60, HACBP, grp60, CALR, CRTC |

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| Dilution | WB~~1/500 - 1/2000 E~~N/A |
| Storage | Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| Precautions | Calreticulin Antibody is for research use only and not for use in diagnostic or therapeutic procedures. |

Protein Information

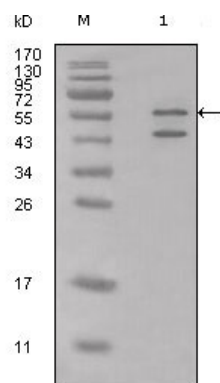
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| Name | CALR (HGNC:1455) |
| Synonyms | CRTC |
| Function | Calcium-binding chaperone that promotes folding, oligomeric assembly and quality control in the endoplasmic reticulum (ER) via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglucosylated glycoproteins that are synthesized in the ER (PubMed: 7876246). Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export (PubMed: 11149926). Involved in maternal gene expression regulation. May participate in oocyte maturation via the regulation of calcium homeostasis (By similarity). Present in the cortical granules of non-activated oocytes, is exocytosed during the cortical reaction in response to oocyte activation and might participate in the block to polyspermy (By similarity). |
| Cellular Location | Endoplasmic reticulum lumen. Cytoplasm, cytosol. Secreted, extracellular space, extracellular matrix. Cell surface. Sarcoplasmic reticulum lumen {ECO:0000250 UniProtKB:P28491}. Cytoplasmic vesicle, secretory vesicle, Cortical granule {ECO:0000250 UniProtKB:Q8K3H7}. Cytolytic granule. Note=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). {ECO:0000250 UniProtKB:P28491, ECO:0000250 UniProtKB:Q8K3H7, ECO:0000269 PubMed:8418194} |

References

1. J Biol Chem. 2006 May 5;281(18):12841-8. Epub 2006 Mar 9. 2. Biochim Biophys Acta. 2006 May;1760(5):745-53. Epub 2006 Feb 28. 3. Oncol Rep. 2007 May;17(5):1101-7.

Images

Figure 1: Western blot analysis using anti-Calreticulin polyclonal antibody against Hela cell lysate.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.