
Calreticulin Ab

Cat.#: BF0641
Size: 50ul,100ul,200ulConcn.: 1mg/ml
Source: MouseMol.Wt.: 63kDa
Clonality: Monoclonal

Application: ELISA 1/10000, WB 1/500 - 1/2000

Reactivity: Human,Mouse,Monkey

Purification: Affinity-chromatography.

Specificity: Calreticulin Ab detects endogenous levels of total Calreticulin.

Immunogen: Purified recombinant fragment of human Calreticulin expressed in E. Coli.

Uniprot: P27797

Description: 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.

Subcellular Location: Endoplasmic reticulum lumen. Cytoplasm > cytosol.
Secreted > extracellular space > extracellular matrix. Cell

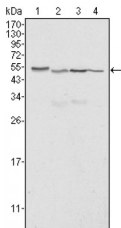
surface. Also found in cell surface (T cells), cytosol and extracellular matrix. Associated with the lytic granules in the cytolytic T-lymphocytes.

Similarity:

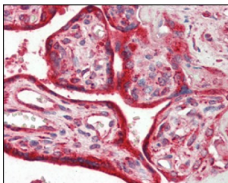
Can be divided into a N-terminal globular domain, a proline-rich P-domain forming an elongated arm-like structure and a C-terminal acidic domain. The P-domain binds one molecule of calcium with high affinity, whereas the acidic C-domain binds multiple calcium ions with low affinity. The interaction with 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. Belongs to the calreticulin family.

Storage Condition and Buffer:

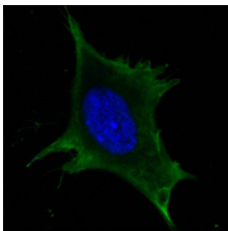
Mouse IgG1 in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at -20 °C. Stable for 12 months from date of receipt.



Western blot analysis using Calreticulin mouse mAb against Hela (1), A549 (2), NTERA2 (3) and MCF-7 (4) cell lysate.



Immunohistochemical analysis of paraffin-embedded human placenta tissues using Calreticulin mouse mAb.



Confocal immunofluorescence analysis of 3T3-L1 cells using Calreticulin mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

IMPORTANT: For western blot, incubate membrane with diluted primary Ab in 5% w/v milk , 1X TBS, 0.1% Tween@20 at 4°C with gentle shaking, overnight.



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website:www.affbiotech.com

order:order@affbiotech.com

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