

CALR Antibody
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5211

Specification

CALR Antibody - Product Information

Application	FC, WB, IHC-P,E
Primary Accession	P27797
Other Accession	NP_004334.1
Reactivity	Human, Rat
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	H=48;M=48;Rat=48 KDa
Isotype	Rabbit IgG
Antigen Source	HUMAN

CALR Antibody - Additional Information

Gene ID 811

Antigen Region
1-437

Other Names

CALR; CRTC; Calreticulin; CRP55; Calregulin; Endoplasmic reticulum resident protein 60; HACBP; grp60

Dilution

FC~~1:10~50
WB~~1:1000
IHC-P~~1:10~50

Target/Specificity

This CALR Antibody is generated from rabbits immunized with a recombinant protein of human CALR.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

CALR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CALR Antibody - Protein Information

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

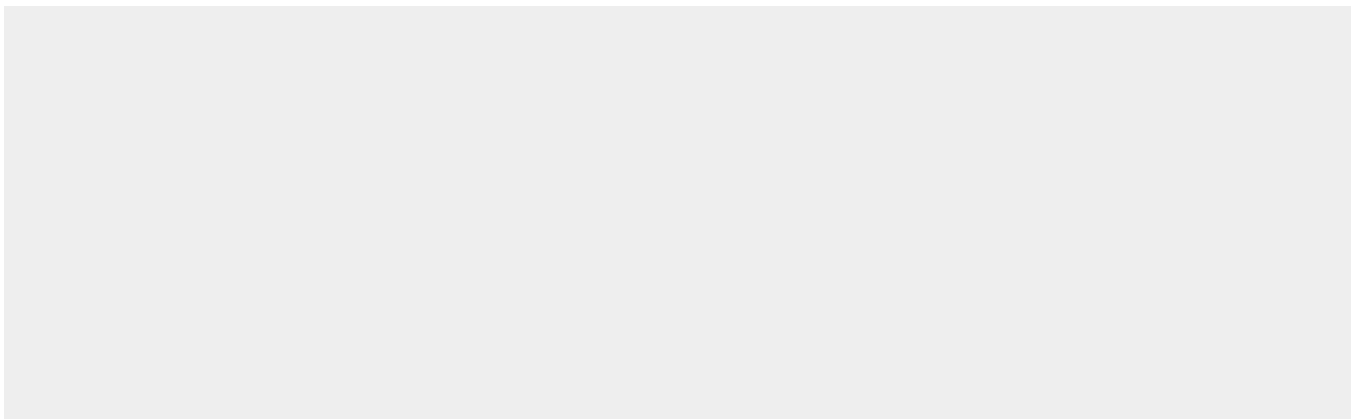
Endoplasmic reticulum lumen. Cytoplasm, cytosol. Secreted, extracellular space, extracellular matrix. Cell surface. Sarcoplasmic reticulum lumen {ECO:0000250|UniProtKB:P28491}. Cytoplasmic vesicle, secretory vesicle, Cortical granule {ECO:0000250|UniProtKB:Q8K3H7}. Cytolytic granule. Note=Also found 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}

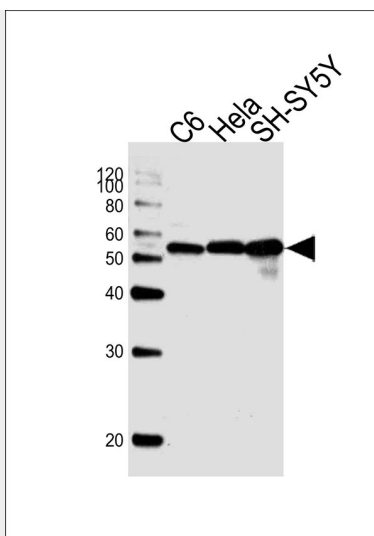
CALR Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

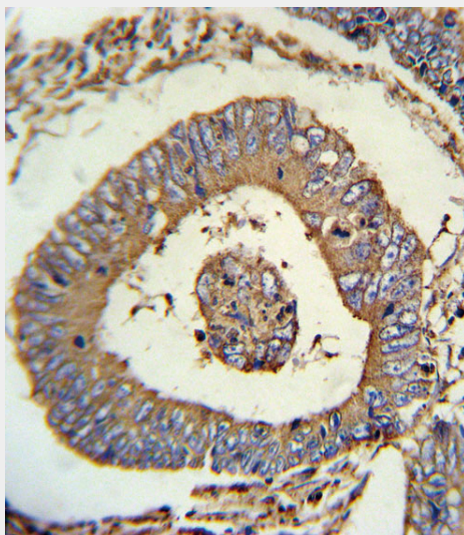
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

CALR Antibody - Images

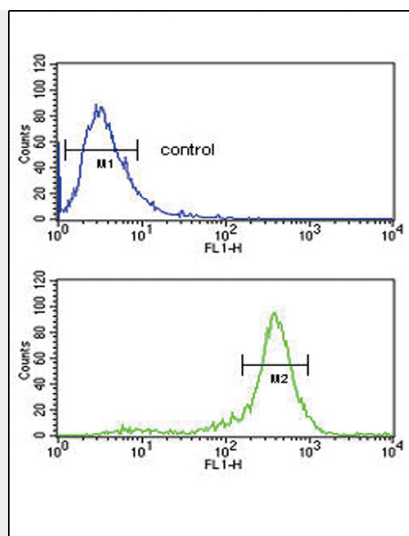




Western blot analysis of lysates from rat C6, HeLa, SH-SY5Y cell line (from left to right), using CALR Antibody (Cat. #AW5211). AW5211 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L (HRP) at 1:10000 dilution was used as the secondary antibody.



CALR Antibody (Cat. #AW5211) immunohistochemistry analysis in formalin fixed and paraffin embedded human colon carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the CALR Antibody for immunohistochemistry. Clinical relevance has not been evaluated.



CALR Antibody (Cat. #AW5211) flow cytometric analysis of HepG2 cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

CALR Antibody - 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 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.

CALR Antibody - References

- Du, X.L., et al. *Oncogene* 28(42):3714-3722(2009)
Sato, H., et al. *Biochim. Biophys. Acta* 1790(10):1198-1205(2009)
Abd Alla, J., et al. *Biochem. Biophys. Res. Commun.* 387(1):186-190(2009)