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Anti-Calreticulin Precursor (RABBIT) Antibody

Calreticulin precursor Antibody
Catalog # ASR5690

Specification

Anti-Calreticulin Precursor (RABBIT) Antibody - Product Information

Host	**Rabbit**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Human**
Clonality	**Polyclonal**
Application	**WB, IHC, E, I, LCI**
Application Note	**Anti-Calreticulin Precursor antibody has been tested in ELISA and western blot and is useful for immunohistochemistry. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately ~48kDa corresponding to the appropriate cell lysate or extract.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Calreticulin precursor affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-terminus of human calreticulin precursor protein.**
Stabilizer	**50% (v/v) Glycerol**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-Calreticulin Precursor (RABBIT) Antibody - Additional Information

Gene ID 811

Purity
Anti-Calreticulin Precursor was affinity purified from monospecific antiserum by immunoaffinity chromatography. A BLAST analysis was used to suggest cross-reactivity with human, mouse, rat, primate, and chicken based on 100% sequence homology. Cross-reactivity with Calreticulin Precursor from other sources has not been determined.

Storage Condition
Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-Calreticulin Precursor (RABBIT) 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}

Anti-Calreticulin Precursor (RABBIT) 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 Cytomety
- Cell Culture

Anti-Calreticulin Precursor (RABBIT) Antibody - Images

Anti-Calreticulin Precursor (RABBIT) Antibody - Background

Calreticulin is the major calcium binding protein found in smooth muscle sarcoplasmic reticulum (SR) and non-muscle endoplasmic reticulum (ER) membranes. This protein was originally identified in SR membranes and plays a minor role in calcium storage in skeletal and cardiac muscle SR. Calreticulin is also known as calregulin, CRP55, CaBP3, calsequestrin-like protein and Ro/SS-A antigen. Calreticulin binds calcium with low affinity and high capacity, however it also exhibits a single high affinity binding site. The highly conserved sequence Lys-Asp-Glu-Leu (KDEL) is present at the C-terminus of calreticulin and other resident ER proteins including glucose regulated protein

78 (GRP78), GRP94 and protein disulfide isomerase (PDI). This sequence is responsible for the retention of newly synthesized proteins within the ER lumen. This retention is reported to be mediated by a KDEL receptor. Recent reports indicate that calreticulin can act as a modulator of the regulation of gene transcription by nuclear hormone receptors and may also act as a molecular chaperone.