

Datasheet for 100-401-E99**Calreticulin Antibody****Overview**

Description:	Anti-Calreticulin (RABBIT) Antibody - 100-401-E99
Item No.:	100-401-E99
Size:	200 µL
Applications:	IF, WB
Reactivity:	Human, Mouse, Rat, Bovine, Chicken, Dog, Guinea Pig, Hamster, Monkey, Pig, Rabbit, Sheep
Host Species:	Rabbit

Product Details**Background:**

Calreticulin is a multifunctional, highly conserved Ca²⁺ -binding protein that is localized to the endoplasmic reticulum (ER), but has also been detected in the nucleus and nuclear envelop. Like many other ER proteins, it has the conserved ER retention KDEL (Lys-Asp-Glu-Leu) sequence at its C-terminus. CRT's three domains include a 180 residue N-terminal domain, a proline-rich P-domain (residues 189-288) that binds Ca²⁺ with high affinity and shares homology with calnexin (CNX) and calmeglin, and a 110 residue C-terminal domain that binds Ca²⁺ with low affinity but high capacity. Recent studies suggest that this soluble ER protein has a multifunctional role. It appears to be involved in calcium storage and regulation as well as having a molecular chaperone activity. It has been shown to interact with the cytoskeleton and to be involved in the regulation of gene expression. Calreticulin may also play a role in cellular proliferation including its apparent activity in the proliferation of certain viruses within mammalian host cells, and it has also been shown to be induced in response to various types of cell stress including amino acid deprivation. Close interconnections among protein synthesis, gene expression and calcium signaling have been observed by many researchers in recent years. Calreticulin might be centrally located and therefore it crucially participates in the coordination of many functions by the cell. Studies also suggest its involvement in a few diseases such as systemic lupus erythematosus, rheumatoid arthritis, celiac disease, complete congenital heart block, and halothane hepatitis.

Synonyms:	CALR, Calregulin, cC1qR, CRP55, ERp60, HSCBP, RO, SSA, grp60, Calreticulin, Endoplasmic reticulum resident protein 60, CRTC
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	CALR
Reactivity:	Human, Mouse, Rat, Bovine, Chicken, Dog, Guinea Pig, Hamster, Monkey, Pig, Rabbit, Sheep
Immunogen Type:	Conjugated Peptide
Immunogen:	Calreticulin Antibody was produced from whole rabbit serum prepared by repeated immunizations with a synthetic peptide of human calreticulin.
Purity/Specificity:	Anti-Calreticulin Antibody was prepared from monospecific antiserum by delipidation and defibrination. A BLAST analysis was used to suggest cross-reactivity with Calreticulin from Human, mouse, rat, bovine, canine, chicken, guinea pig, monkey, pig, hamster, rabbit, and sheep based on 100% homology with the immunizing sequence. Cross-reactivity with Calreticulin from other sources has not been determined. Cell Signaling research.
Relevant Links:	• NCBI - NP_004334.1 • GeneID - 811 • UniProtKB - P27797

Application Details

Tested Applications:	IF, WB
Application Note:	Anti-Calreticulin Antibody has been tested by western blot and immunofluorescence and is suitable for use in IHC and IP. Expect a band approximately ~63kDa on specific lysates. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
IF:	1:200
IHC:	User Optimized
IP:	User Optimized
WB:	1:5000-10000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	1X PBS, pH 7.4

Preservative: 0.09% (w/v) Sodium Azide

Stabilizer: 50% (v/v) Glycerol

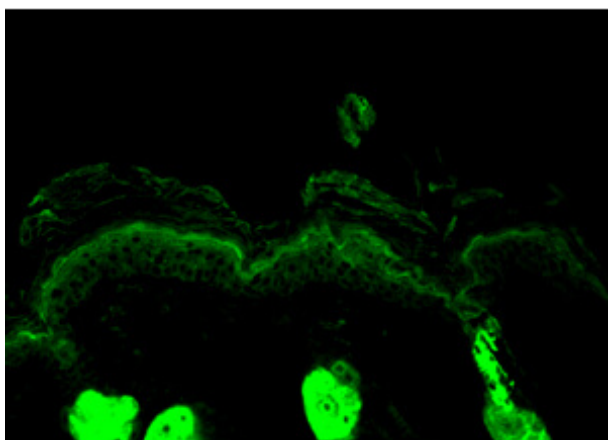
Shipping & Handling

Shipping Condition: Dry Ice

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.

Expiration: Expiration date is one (1) year from date of receipt.

Images

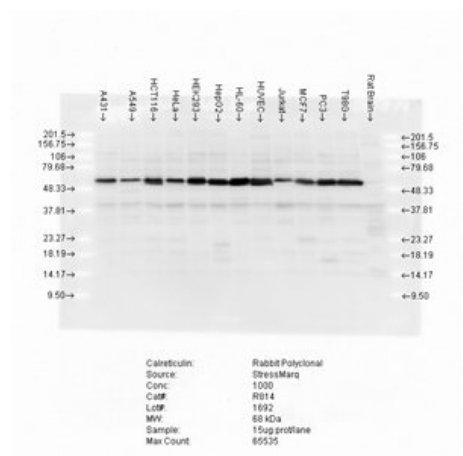


Immunofluorescence Microscopy

Immunofluorescence Microscopy of rabbit Anti-Calreticulin Antibody. Tissue: Backskin section of transgenic mice. Fixation: Paraffin-embedded. Primary antibody: anti-Calreticulin for 1h at RT. Secondary antibody: Peroxidase rabbit secondary at 1:10,000 for 45 min at RT. Localization: Cytoplasm. Staining: Calreticulin as precipitated green signal.

Western Blot

Western Blot of rabbit anti-Calreticulin antibody. Lane 1: A431. Lane 2: A549. Lane 3: HCT116. Lane 4: HeLa. Lane 5: HEK293. Lane 6: HepG2. Lane 7: HL-60. Lane 8: HUVEC. Lane 9: Jurkat. Lane 10: MCF7. Lane 11: PC3. Lane 12: T98G. Lane 13: Rat Brain. Load: 10ug. Primary antibody: Calreticulin at 1:1000 overnight at 4°C. Secondary antibody: Goat anti-rabbit IgG HRP at 1:40,000 for 45 min at RT. Blocked: 5% BLOTTO overnight at 4°C. Predicated/observed size: 48kDa, 63kDa for Calreticulin.



References

- Gao F et al. Calreticulin (CALR)-induced activation of NF- κ B signaling pathway boosts lung cancer cell proliferation. *Bioengineered*. (2022)

Disclaimer

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