



Recombinant Rat Calreticulin (Calr)

Product Code	CSB-EP004458RA-B
Storage	Store at -20°C, for extended storage, conserve at -20°C or -80°C.
Uniprot No.	P18418
Product Type	Recombinant Protein
Immunogen Species	Rattus norvegicus (Rat)
Purity	≥85% (SDS-PAGE)
Sequence	DPA IYFKEQFLDG DAWTNRWVES KHKSDFGK FV LSSGKFYGDQ EKDKGLQTSQ DARFYALSAR FEPFSNKGQT LVVQFTVKHE QNIDCGGGYV KLFPGGLDQK DMHGDSEYNI MFGPDICGPG TKKVHVIFNY KGKNVLINKD IRCKDDEFTH LYTLIVRPDN TYEVKIDNSQ VESGSLEDDW DFLPPKKIKD PDAAKPEDWD ERAKIDDPTD SKPEDWDKPE HIPDPDAKKP EDWDEEMDGE WEPPVIQNPE YKGEWKPRQI DNPDYKGTWI HPEIDNPEYS PDANIYAYDS FAVLGLDLWQ VKSGTIFDNF LITNDEAYAE EFGNETWGVT KAAEQMKDK QDEEQRLKEE EEDKKRKEEE EAEDKEDEDD RDEDEDEEDE KEEDEEDATG QAKDEL
Source	E.coli
Target Names	Calr
Protein Names	Recommended name: Calreticulin Alternative name(s): CALBP CRP55 Calcium-binding protein 3 Short name= CABP3 Calregulin Endoplasmic reticulum resident protein 60 Short name= ERp60 HACBP
Expression Region	18-416
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	Tag type will be determined during the manufacturing process.
Protein Length	Full Length of Mature Protein
Target Details	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.

Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.