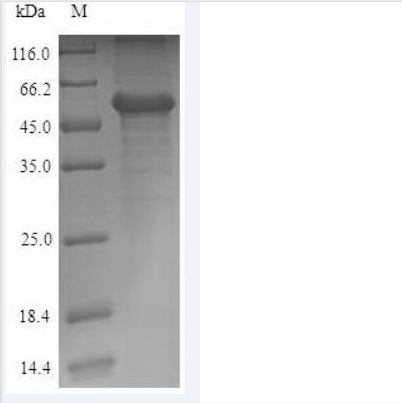
Recombinant Human Calreticulin (CALR)

Product Code	CSB-EP004458HU
Relevance	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. Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export. Involved in maternal gene expression regulation. May participate in oocyte maturation via the regulation of calcium homeostasis
Abbreviation	Recombinant Human CALR protein
Storage	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.
Uniprot No.	P27797
Alias	CRP55 Calregulin Endoplasmic reticulum resident protein 60
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	EPAVYFKEQFLDGDGWTSRWIESKHKSDFGKFVLSSGKFYGDEEKDKGLQTS QDARFYALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTD MHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIV RPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDASKPEDWDERAKIDDPT DSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQI DNPDYKGTWIHPEIDNPEYSPDPSIYAYDNFGVLGLDLWQVKSGTIFDNFLITN DEAYAEEFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEDKKRKEEEEAEDK EDDEDKDEDEEDEEDKEEDEEEDVPGQAKDEL
Research Area	Tags & Cell Markers
Source	E.coli
Target Names	CALR
Protein Names	Recommended name: Calreticulin Alternative name(s): CRP55 Calregulin Endoplasmic reticulum resident protein 60 Short name= ERp60 HACBP grp60
Expression Region	18-417aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-tagged
Mol. Weight	50.6kDa
Protein Length	Full Length of Mature Protein

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The region for expressing recombinant Human CALR contains amino acids 18-417. This CALR protein is expected to have a theoretical molecular weight of 50.6 kDa. Expression of this CALR protein is conducted in e.coli. The N-terminal 6xHis tag was fused into the coding gene segment of CALR, making it easier to detect and purify the CALR recombinant protein in the later stages of expression and purification.

Calreticulin (CALR) is a multifunctional protein with primary research areas encompassing cell biology and immunology. In cell biology, CALR plays a crucial role in the endoplasmic reticulum, participating in protein folding and modification, and playing a key role in the regulation of intracellular calcium ions. One of the most prominent research directions is the function of CALR in the immune system. CALR plays a critical role in cellular apoptosis, contributing to the immune system's self-recognition and clearance of aberrant cells. Mutations in CALR, particularly in diseases like leukemia, are closely associated with abnormal activation of the immune system, making it a hotspot in immunotherapy and cancer research. In the cardiovascular system, the interaction between CALR and cardiac muscle cells may be related to cardiac pathophysiology. In the nervous system, CALR is associated with neuronal survival and synapse formation, providing insights into research on neurodegenerative diseases.

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

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