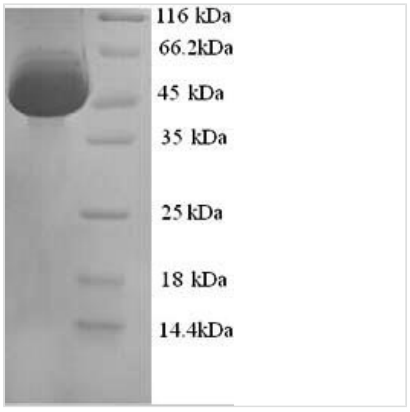
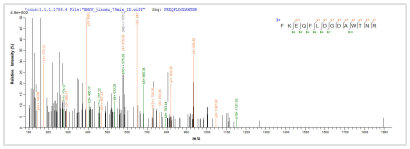
Recombinant Mouse Calreticulin (Calr)

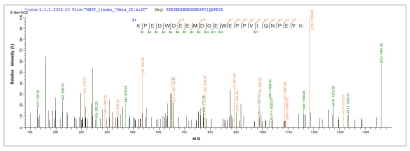
Product Code	CSB-YP004458MO
Relevance	Calcium-binding chaperone that promotes folding, oligomeric assbly and quality control in the endoplasmic reticulum (ER) via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglucosylated glycoproteins that are synthesized 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 Mouse 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.	P14211
Product Type	Recombinant Proteins
Immunogen Species	Mus musculus (Mouse)
Purity	Greater than 95% as determined by SDS-PAGE. Greater than 95% as determined by SEC-HPLC.
Sequence	DPAIYFKEQFLDGDAWTNRWVESKHKSDFGKFVLSSGKFYGDLEKDKGLQTS QDARFYALSAKFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPSGLDQKD MHGDSEYNIMFGPDICGPGTKKVHVIFNYKGKNVLINKDIRCKDDEFTHLYTLIV RPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDAAKPEDWDERAKIDDPT DSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQI DNPDYKGTWIHPEIDNPEYSPDANIYAYDSFAVLGLDLWQVKSGTIFDNFLITN DEAYAEEFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEDKKRKEEEEAEDK EDDDDRDEDEDEEDEKEEDEEESPGQAKDEL
Research Area	Others
Source	Yeast
Target Names	Calr
Protein Names	Recommended name: CalreticulinAlternative name(s): CRP55 Calregulin Endoplasmic reticulum resident protein 60 Short name= ERp60 HACBP
Expression Region	18-416aa
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	48.3kDa
Protein Length	Full Length of Mature Protein
Image	



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



Based on the SEQUEST from database of Yeast host and target protein, the LC-MS/MS Analysis result of CSB-YP004458MO could indicate that this peptide derived from Yeast-expressed Mus musculus (Mouse) Calr.



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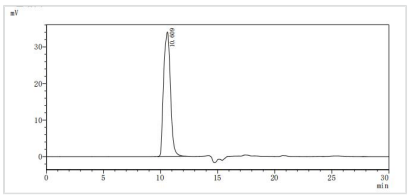

The purity of Calr was greater than 95% as determined by SEC-HPLC

Description

Recombinant murine Calreticulin (Calr) fragment Asp18-Leu416 with an N-terminal 6xHis-tag was expressed in yeast. This LC-MS/MS Analysis-verified Yeast-expressed Recombinant Mouse Calr peptide is the full-length mature protein from amino acid 18 to 416. It is greater than 90% in purity as determined by SDS-PAGE. Its predicted molecular weight is approximately 48.3 kDa. Under reducing conditions, its actual molecular mass is a little bit more than that of the calculated due to glycosylation. This Calr protein can immunize animals such as rabbits to generate corresponding antibodies and also be used in the studies of cancer therapies.

Calr is a highly conserved endoplasmic reticulum chaperone protein involved in multiple cellular activities, such as proper protein folding and assembly, the maintenance of intracellular calcium homeostasis, cell adhesion, and RNA stability. Also, emerging evidence shows that Calr is involved in tumorigenesis by promoting proliferation, migration, and adhesion. Interestingly, Calr translocated to the cell surface facilitates the phagocytic uptake of apoptotic and cancer cells by inducing an immune response, which may suggest a potent immunotherapy-based anti-cancer strategy.

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.