Calreticulin/CALR Protein, Mouse (GST)

Cat. No.:	HY-P72112
Synonyms:	CalrCalreticulin; CRP55; Calregulin; Endoplasmic reticulum resident protein 60; ERp60; HACBP
Species:	Mouse
Source:	E. coli
Accession:	P14211 (D18-L416)
Gene ID:	12317
Molecular Weight:	Approximately 73.3 kDa

PROPERTIES

AA Sequence	D P A I Y F K E Q F L D G D A W T N R W V E S K H K S D F G K F V L S S G K F Y G D L E K D K G L Q T S Q D A R F Y A L S A K F E P F S N K G Q T L V V Q F T V K H E Q N I D C G G G Y V K L F P S G L D Q K D M H G D S E Y N I M F G P D I C G P G T K K V H V I F N Y K G K N V L I N K D I R C K D D E F T H L Y T L I V R P D N T Y E V K I D N S Q V E S G S L E D D W D F L P P K K I K D P D A A K P E D W D E R A K I D D P T D S K P E D W D K P E H I P D P D A K K P E D W D E E M D G E W E P P V I Q N P E Y K G E W K P R Q I D N P D Y K G T W I H P E I D N P E Y S P D A N I Y A Y D S F A V L G L D L W Q V K S G T I F D N F L I T N D E A Y A E E F G N E T W G V T K A A E K Q M K D K Q D E E Q R L K E E E E D K K R K E E E E A E D K E D D D D R D E D E D E E D E K E E D E E E S P G Q A K D E L
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm solution of Tris-based buffer, 50% Glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	Calreticulin/CALR protein, a calcium-binding chaperone, orchestrates crucial functions in the endoplasmic reticulum (ER) through the calreticulin/calnexin cycle, promoting the folding, oligomeric assembly, and quality control of glycoproteins. This lectin transiently interacts with nearly all monoglucosylated glycoproteins synthesized in the ER, contributing to their

proper maturation and function. Beyond its role in glycoprotein processing, CALR is involved in diverse cellular processes. It interacts with the DNA-binding domain of NR3C1, mediating its nuclear export and influencing gene expression regulation. Furthermore, CALR may play a role in oocyte maturation by regulating calcium homeostasis and participating in the cortical reaction during oocyte activation, potentially contributing to the block against polyspermy. CALR forms complexes with various proteins, including GABARAP, PDIA3/ERp57, and TRIM21, highlighting its versatile interactions within cellular pathways. It also engages in intricate protein-protein interactions with PPIB, SPACA9, and CLCC1, underscoring its involvement in diverse cellular processes and protein complexes.

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