

Calreticulin/CALR Protein, Pig (*P.pastoris*, His)

Cat. No.:	HY-P71722
Synonyms:	CALRCalreticulin; CRP55; Calregulin; Endoplasmic reticulum resident protein 60; ERp60; HACBP
Species:	Pig
Source:	<i>P. pastoris</i>
Accession:	P28491 (18E-417L)
Gene ID:	100381266
Molecular Weight:	Approximately 48.6 kDa

PROPERTIES

AA Sequence	<pre> E P T I Y F K E Q F L D G D G W T D R W I E S K H K P D F G R F V L S S G K F Y G D Q E K D K G L Q T S Q D A R F Y A L S A R 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 D G L D Q T 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 V 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 S N I Y A Y E N 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 E K K R K E E E E V D K E D E E D K D E D E E E E D E K E E E E E E D A A A G Q A K D E L </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
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) is a calcium-binding chaperone that plays a crucial role in the endoplasmic reticulum (ER) by facilitating folding, oligomeric assembly, and quality control through the calreticulin/calnexin cycle. It interacts transiently with almost all monoglucosylated glycoproteins synthesized in the ER. Additionally, CALR interacts with the DNA-binding domain of
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NR3C1, promoting its nuclear export. CALR is also involved in regulating maternal gene expression and may contribute to oocyte maturation by maintaining calcium homeostasis. In non-activated oocytes, CALR is localized in cortical granules and is released during the cortical reaction upon oocyte activation, potentially preventing polyspermy. CALR exists as a monomer and is part of an EIF2 complex consisting of CELF1/CUGBP1, CALR, CALR3, EIF2S1, EIF2S2, HSP90B1, and HSPA5. It interacts with various proteins such as PDIA3/ERp57, SPACA9, TRIM21, NR3C1, PPIB, PDIA5, and CLCC1.

Caution: Product has not been fully validated for medical applications. For research use only.

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