



**Catalog Number:** PR27274

**Product Type:** Recombinant Protein

**Source:** E. Coli

**Amino Acid Sequence:** MGSSHHHHHH SSSLVPRGSH MEPAVYFKEQ FLDGDGWTSR WIESKHKSDF GKFLVSSGKF YGDEEKDKGL QTSQDARFYA LSASFEPFSN KGQTLVVQFT VKHEQNIDCG GGYVKLFPNS LDQTDMHGDS EYNIMFGPDI CGPGTKKVHV IFNYKGKNVL INKDIRCKDD EFTHLYTLIV RPDNTYEVK DNSQVESGSL EDDWDFLPPK KIKDPDASKP EDWDERAKID DPTDSKPEDW DKPEHIPDPD AKKPEDWDEE MDGEWEPPVI QNPEYKGEWK PRQIDNPDYK GTWIHPEIDN PEYSPDPSIY AYDNFVGLGL DLWQVKSQGTI FDNFLITNDE AYAEFNET WGVTKAAEKQ MKDKQDEEQR LKEEEDKKR KEEEEEADKE DDEKDEDEE DEEDKEEDEE EDVPGQAKDE L.

**Description/Molecular Mass:** CALR is a multifunctional protein that acts as a main Ca(2+)-binding (storage) protein in the lumen of the endoplasmic reticulum. Calreticulin is localized in the nucleus, and participates in transcription regulation. Calreticulin binds to the synthetic peptide KLGFFKR, which is nearly identical to an amino acid sequence in the DNA-binding domain of the superfamily of nuclear receptors. CALR binds to antibodies in specific sera of systemic lupus and Sjogren patients which have anti-Ro/SSA antibodies, it is well conserved among species, and it is positioned in the endoplasmic and sarcoplasmic reticulum where it binds calcium. The amino terminus of CALR interacts with the DNA-binding domain of the glucocorticoid receptor and prevents the receptor from binding to its specific glucocorticoid response element. CALR reduces the binding of androgen receptor to its hormone-responsive DNA element and inhibits androgen receptor and retinoic acid receptor transcriptional activities in vivo, as well as retinoic acid-induced neuronal differentiation. Therefore, CALR acts as a significant modulator of the regulation of gene transcription by nuclear hormone receptors.

**Purity:** CALR Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 421 amino acids (18-417 a.a.) and having a molecular mass of 48.7 kDa. CALR protein is fused to a 21 amino acid His-Tag at N-terminus and purified by standard chromatography. Greater than 85.0% as determined by:  
(a) Analysis by SDS-PAGE.

**Format:** CALR Human solution containing 20mM Tris-HCl pH-8, 1mM DTT, 0.1M NaCl and 10% glycerol.

**Storage:** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### FOR RESEARCH USE ONLY

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