

## CALR Human

**Description:** 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 20 amino acid His-Tag at N-terminus and purified by standard chromatography.

Catalog #: PRPS-820

For research use only.

**Synonyms:** cC1qR, CRT, FLJ26680, RO, SSA, CRP55, Calreticulin, ERp60, CRTc, CALR.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHH SSGLVPRGSH MEPAVYFKEQ FLDGDGWTSR  
WIESKHKSD F GKFVLSSGKF YGDEEKDKGL QTSQDARFYA LSASFEPFSN KGQTLVVQFT  
VKHEQNIDCG GGYVKLFPNS LDQTMHGDS EYNIMFGPDI CGPGTKKVHV IFNYKGKNVL  
INKDIRCKDD EFTHLYTLIV RPDNTYEVKI DNSQVESGSL EDDWDFLPPK KIKDPDASKP  
EDWDERAKID DP

**Purity:** Greater than 85% as determined by SDS-PAGE.

**Formulation:**

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

**Stability:**

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.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. They may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

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.

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