

Recombinant Full Length Human CALR Protein, GST-tagged

Cat. No. CALR-3078HF Lot. No. (See product label)

SPECIFICATION

Product Overview Human CALR full-length ORF (AAH02500.1, 1 a.a. - 417 a.a.) recombinant protein with GST-tag at N-terminal.

Species Human

Source In Vitro Cell Free System

ProteinLength 417 amino acids

Description

Calreticulin is a multifunctional protein that acts as a major Ca(2+)-binding (storage) protein in the lumen of the endoplasmic reticulum. It is also found in the nucleus, suggesting that it may have a role in transcription regulation. Calreticulin binds to the synthetic peptide KLGFFKR, which is almost identical to an amino acid sequence in the DNA-binding domain of the superfamily of nuclear receptors. Calreticulin binds to antibodies in certain sera of systemic lupus and Sjogren patients which contain anti-Ro/SSA antibodies, it is highly conserved among species, and it is located in the endoplasmic and sarcoplasmic reticulum where it may bind calcium. The amino terminus of calreticulin interacts with the DNA-binding domain of the glucocorticoid receptor and prevents the receptor from binding to its specific glucocorticoid response element. Calreticulin can inhibit the binding of androgen receptor to its hormone-responsive DNA element and can inhibit androgen receptor and retinoic acid receptor transcriptional activities in vivo, as well as retinoic acid-induced neuronal differentiation. Thus, calreticulin can act as an important modulator of the regulation of gene transcription by nuclear hormone receptors. Systemic lupus erythematosus is

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

associated with increased autoantibody titers against calreticulin but calreticulin is not a Ro/SS-A antigen. Earlier papers referred to calreticulin as an Ro/SS-A antigen but this was later disproven. Increased autoantibody titer against human calreticulin is found in infants with complete congenital heart block of both the IgG and IgM classes. [provided by RefSeq, Jul 2008]

Molecular Mass 71.61 kDa

AA Sequence

MLLSVPLLLGLLGLAVAEPVYFKEQFLDGDGWTSRWIESKHKSDFGKFLVSSGKFY
 GDEEKDKGLQTSQDARFYALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLF
 PNSLDQDTDMHGDSEYNIMFGPDICGPGTKKVHVIFNYKGNVLINKDIRCKDDEFTH
 LYTLIVRPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKDPDASKPEDWDERAKIDD
 PTDSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPIQNPEYKGEWKPRQIDN
 PDYKGTWIHPEIDNPEYSPDPSIYAYDNFVGLGLDLWQVKSGTIFDNFLITNDEAYAE
 EFGNETWGVTKAAEKQMKDKQDEEQRLKEEEEEDKKRKEEEEAEDEKEDDEDKDED
 EEDEEDKEEDEEEDVPGQAKDEL

Applications

Enzyme-linked Immunoabsorbent Assay
 Western Blot (Recombinant protein)
 Antibody Production
 Protein Array

Notes

Best use within three months from the date of receipt of this protein.

Storage

Store at -80 centigrade. Aliquot to avoid repeated freezing and thawing.

Storage Buffer

50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.

GENE INFORMATION

Gene Name

CALR calreticulin [Homo sapiens]

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Official Symbol	CALR
Synonyms	CALR; calreticulin; autoantigen Ro; cC1qR; CRT; FLJ26680; RO; Sicca syndrome antigen A (autoantigen Ro; calreticulin); SSA; CRP55; ERp60; HACBP; grp60; calregulin; endoplasmic reticulum resident protein 60; Sicca syndrome antigen A (autoantigen Ro; calreticulin);
Gene ID	811
mRNA Refseq	NM_004343
Protein Refseq	NP_004334
MIM	109091
UniProt ID	P27797

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