Recombinant Human CALR

Cat. No. CALR-27213TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human Calreticulin. MWt 55 kDa,
Species	Human
Source	E.coli
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 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

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	found in infants with complete congenital heart block of both the IgG and IgM classes.
Form	Liquid
Storage buffer	Preservative: NoneConstituents: Glycerol, Sodium chloride, Tris buffered saline, 5mM Calcium chloride
Storage	Shipped on dry ice. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequence Similarities	Belongs to the calreticulin family.
Full Length	Full L.

GENE INFORMATION

Gene Name	CALR calreticulin [Homo sapiens]
Official Symbol	CALR
Synonyms	CALR; calreticulin; autoantigen Ro; cC1qR; CRT; FLJ26680; RO; Sicca syndrome antigen A (autoantigen Ro; calreticulin); SSA;
Gene ID	811
mRNA Refseq	NM_004343
Protein Refseq	NP_004334
MIM	109091

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Uniprot ID	P27797
Chromosome Location	19p13.3-p13.2
Pathway	Activation of Chaperones by ATF6-alpha, organism-specific biosystem; Adaptive Immune System, organism-specific biosystem; Androgen Receptor Signaling Pathway, organism-specific biosystem; Antigen Presentation: Folding, assembly and peptide loading of class I MHC, organism-specific biosystem; Antigen processing and presentation, organism-specific biosystem;
Function	DNA binding; androgen receptor binding; calcium ion binding; calcium ion binding; carbohydrate binding;

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