CALR Blocking Peptide

PRODUCT OVERVIEW

Product Name	CALR, Blocking Peptide
Full Product Name	CALR Peptide
Product Gene Name	CALR blocking peptide
Product Synonym Gene Name	RO; CRT; SSA; cC1qR
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	CALR peptide (MBS3224865) is used for blocking the activity of CALR antibody (MBS3200177)
Molecular Weight	48kDa
OMIM	109091
Product Categories/Family for CALR blocking peptide	Peptide
Applications Tested/Suitable for CALR blocking peptide	Immunohistochemistry (IHC), Western Blot (WB)
Related Product Information for CALR blocking peptide	This is a synthetic peptide designed for use in combination with anti-CALR antibody made Target 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.
Other Notes	Small volumes of CALR blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CALR purchase	MBS3224865 is a blocking peptide targeting CALR. Also known as CALR Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CALR. It may not necessarily be applicable to this product.

NCBI GI #	4757900
NCBI GeneID	811
NCBI Accession #	NP_004334
UniProt Primary Accession #	P27797
UniProt Related Accession #	P27797
GenBank Nucleotide #	NM_004343
NCBI Official Full Name	calreticulin
NCBI Official Synonym Full Names	calreticulin

NCBI Official Symbol	CALR
NCBI Official Synonym Symbols	RO; CRT; SSA; cC1qR; HEL-S-99n
UniProt Protein Name	Calreticulin
UniProt Synonym Protein Names	CRP55; Calregulin; Endoplasmic reticulum resident protein 60; ERp60; HACBP; grp60
Protein Family	Calreticulin
UniProt Gene Name	CALR
UniProt Synonym Gene Names	CRTC; ERp60
UniProt Entry Name	CALR_HUMAN
NCBI Protein Information	calreticulin
NCBI Summary for CALR	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 found in infants with complete congenital heart block of both the IgG and IgM classes. [provided by RefSeq, Jul 2008]

UniProt Comments for CALR	Calreticulin: Calcium-binding chaperone that promotes folding, oligomeric assembly and quality control in the endoplasmic reticulum (ER) via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglucosylated glycoproteins that are synthesized in the ER. Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export. Involved in maternal gene expression regulation. May participate in oocyte maturation via the regulation of calcium homeostasis. Monomer. Component of an EIF2 complex at least composed of CELF1/CUGBP1, CALR, CALR3, EIF2S1, EIF2S2, HSP90B1 and HSPA5. Interacts with PDIA3/ERp57. Interacts with NR3C1 and TRIM21. Interacts with GABARAP. Belongs to the calreticulin family. Protein type: Secreted, signal peptide; Secreted; Nuclear receptor co-regulator; Calcium-binding; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 19p13.3-p13.2 Cellular Component: Golgi apparatus; extracellular space; smooth endoplasmic reticulum; sarcoplasmic reticulum lumen; cell surface; focal adhesion; endoplasmic reticulum lumen; endoplasmic reticulum; extracellular region; acrosome; cytosol; polysome; proteinaceous extracellular matrix; membrane; perinuclear region of cytoplasm; cytoplasm; intracellular; nucleus; external side of plasma membrane Molecular Function: hormone binding; zinc ion binding; complement component C1q binding; unfolded protein binding; calcium ion binding; peptide binding; mRNA binding; integrin binding; protein binding; androgen receptor binding; DNA binding; ubiquitin protein ligase binding; iron ion binding; chaperone binding; glycoprotein binding; carbohydrate binding Biological Process: protein maturation via protein folding; protein folding; regulation of meiosis; negative regulation of transcription from RNA polymerase II promoter; cardiac muscle cell differentiation; response to estradiol stimulus; regulation of apoptosis; antigen processing and presentation of peptide antigen via MHC class I; regulation of transcription, DNA-dependent; positive regulation of phagocytosis; positive regulation of cell proliferation; antigen processing and presentation of exogenous peptide antigen via MHC class I; protein export from nucleus; cortical actin cytoskeleton organization and biogenesis; cell cycle arrest; response to drug; receptor-mediated endocytosis; negative regulation of steroid hormone receptor signaling pathway; protein stabilization; unfolded protein response; antigen processing and presentation of exogenous peptide antigen via MHC class I, TAP-dependent; positive regulation of cell cycle; response to testosterone stimulus; post-translational protein modification; peptide antigen assembly with MHC class I protein complex; cellular calcium ion homeostasis; negative regulation of retinoic acid receptor signaling pathway; negative regulation of neuron differentiation; unfolded protein response, activation of signaling protein activity; cellular protein metabolic process; sequestering of calcium ion; negative regulation of translation; glucocorticoid receptor signaling pathway; protein amino acid N-linked glycosylation via asparagine; spermatogenesis; negative regulation of transcription, DNA-dependent; positive regulation of DNA replication Disease: Myelofibrosis; Thrombocythemia 1
Research Articles on CALR	**1.** Insights into the mechanism of the pathogenic mutant CALR-MPL interaction in myeloproliferative neoplasms.
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