

Product datasheet for RC203222

Calreticulin (CALR) (NM_004343) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Calreticulin (CALR) (NM_004343) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Calreticulin
Synonyms:	cC1qR; CRT; HEL-S-99n; RO; SSA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC203222 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCTGCTATCCGTGCCGCTGCTGCTCGGCCTCCTCGGCCTGGCCGTGCCGAGCCTGCCGTCTACTTCA
AGGAGCAGTTTCTGGACGGAGACGGGTGGACTTCCCGCTGGATCGAATCCAAACACAAGTCAGATTTTGG
CAAATTCGTTCTCAGTTCGGCAAGTTCTACGGTGACGAGGAGAAAGATAAAGTTTGCAGACAAGCCAG
GATGCACGCTTTATGCTCTGTCCGCCAGTTTCGAGCCTTTCAGCAACAAAGCCAGACGCTGGTGGTGC
AGTTCACGGTGAACATGAGCAGAACATCGACTGTGGGGCGGCTATGTGAAGCTGTTTCCTAATAGTTT
GGACCAGACAGACATGCACGGAGACTCAGAATACAACATCATGTTTGGTCCCAGACATCTGTGCCCTGGC
ACCAAGAAGGTTTCATGTCATCTTCAACTACAAGGCAAGAACGTGCTGATCAACAAGGACATCCGTTGCA
AGGATGATGAGTTTACACACCTGTACACACTGATTGTGCGGCCAGACAACACCTATGAGGTGAAGATTGA
CAACAGCCAGGTGGAGTCCGGCTCCTTGGAAAGACGATTGGGACTTCTGCCACCCAAGAAGATAAAGGAT
CCTGATGCTTCAAACCGGAAGACTGGGATGAGCGGGCCAAGATCGATGATCCCACAGACTCCAAGCCTG
AGGACTGGGACAAGCCCGAGCATATCCCTGACCCTGATGCTAAGAAGCCCGAGGACTGGGATGAAGAGAT
GGACGGAGAGTGGGAACCCCAAGTATTGATCAGAACCCCTGAGTACAAGGGTGAAGGAGCCCGGCAGATC
GACAACCCAGATTACAAGGGCACTTGGATCCACCCAGAAATGACAACCCCGAGTATTCTCCCGATCCCA
GTATCTATGCCTATGATAACTTTGGCGTGTGGCCTGGACCTCTGGCAGGTCAAGTCTGGCACCATCTTT
TGACAACCTCCTCATACCAACGATGAGGCATACGCTGAGGAGTTTGGCAACGAGACGTGGGGCGTAAACA
AAGGCAGCAGAGAAAACAATGAAGGACAAAAGGACGAGGAGCAGAGGCTTAAGGAGGAGGAAGAAGACA
AGAAACGCAAAGAGGAGGAGGAGGACAGAGGACAAGGAGGATGATGAGGACAAAGATGAGGATGAGGAGGA
TGAGGAGGACAAGGAGGAAGATGAGGAGGAAGATGTCCCGGCCAGGCCAAGGACGAGCTG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAAGTTTAA



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Protein Sequence: >RC203222 protein sequence
Red=Cloning site Green=Tags(s)

MLLSVPLLLGLLGLAVAEPVYFKEQFLDGDGWSRWIESKHKSDFGKFLVSSGKFGDEEKDKGLQTSQ
 DARFYALSASFEPFSNKGQTLVVQFTVKHEQNIDCGGGYVKLFPNSLDQTMHGDSEYNIMFGPDICGPG
 TKKVHVIFNYKGNVLIINKDIRCKDDEFTHLYTLIVRPDNTYEVKIDNSQVESGSLEDDWDFLPPKKIKD
 PDASKPEDWDERAKIDDPDTSKPEDWDKPEHIPDPDAKKPEDWDEEMDGEWEPPVIQNPEYKGEWKPRQI
 DNPDYKGTWIHPEIDNPEYSPDPSIYAYDNFVGLGLDLWQVKSQGTIFDNFLITNDEAYAEFFGNETWGV
 TAAEKQMKDKQDEEQRLKEEEEDKKRKEEEEAEDEKEDDEKDEDEEEDKEEEDVPGQAKDEL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6152_e11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_004343

ORF Size: 1251 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_004343.4](#)

RefSeq Size: 1929 bp

RefSeq ORF: 1254 bp

Locus ID: 811

UniProt ID: [P27797](#)

Cytogenetics: 19p13.13

Domains: calreticulin

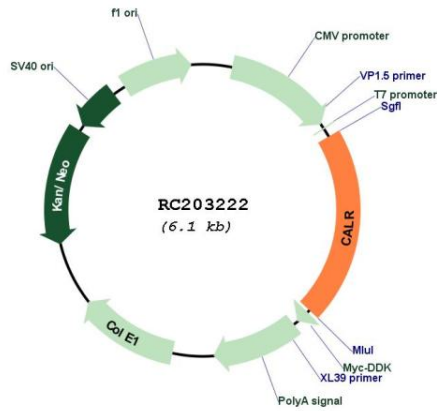
Protein Families: Druggable Genome, Secreted Protein, Transcription Factors

Protein Pathways: Antigen processing and presentation

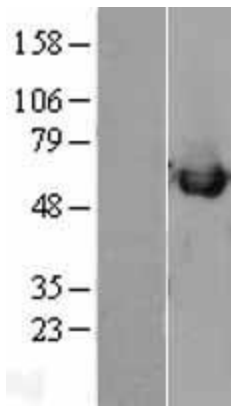
MW: 48.1 kDa

Gene Summary: Calreticulin is a highly conserved chaperone protein which resides primarily in the endoplasmic reticulum, and is involved in a variety of cellular processes, among them, cell adhesion. Additionally, it functions in protein folding quality control and calcium homeostasis. Calreticulin is also found in the nucleus, suggesting that it may have a role in transcription regulation. Systemic lupus erythematosus is associated with increased autoantibody titers against calreticulin. Recurrent mutations in calreticulin have been linked to various neoplasms, including the myeloproliferative type.[provided by RefSeq, May 2020]

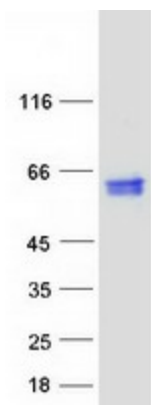
Product images:



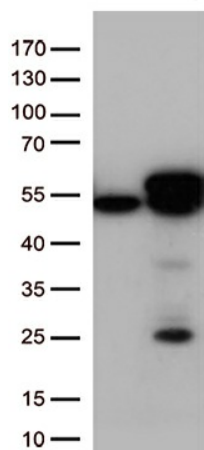
Circular map for RC203222



Western blot validation of overexpression lysate (Cat# [LY401384]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203222 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CALR protein (Cat# [TP303222]). The protein was produced from HEK293T cells transfected with CALR cDNA clone (Cat# RC203222) using MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CALR (Cat# RC203222, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CALR (Cat# [TA813231])(1:500).