Calreticulin (human), (recombinant) (His-tag)

Recombinant human Calreticulin (His-tag) that functions as an ER chaperone and calcium-binding protein, ensuring proper protein folding and quality control.

The multifunctional, multi-compartmental protein Calreticulin (Crt) functions as a soluble molecular chaperone of new or misfolded proteins as well as a calcium-binding protein. Most abundant in the ER lumen, Crt expression also occurs in other membrane-bound organelles, the cell surface, and extracellularly. Also known as CRP-55, calregulin and HACBP (high affinity calcium-binding protein). Crt contains the ER retrieval sequence, KDEL, and is the soluble paralog of the ER membrane protein Calnexin (Cnx). Crt's three domains include a 180 residue N-terminal domain, a proline-rich P-domain (residues 189-288) that binds calcium with high affinity and shares homology with Cnx and calmegin, and a 110 residue C-terminal domain that binds calcium with low affinity but high capacity. The P-domain may interact with the co-chaperone ERp57 (Grp58), a thiol reductase. The NMR structure of the P-domain consists of an extended hairpin that appears to form a curved protrusion from the Crt core domain. Both Crt and its membrane bound homolog CNX interact with proteins and glycoproteins possessing monoglucosylated N-glycans. The Crt/Cnx cycle promotes correct folding, inhibits aggregation of folding intermediates, blocks premature oligomerization, regulates ER degradation, and prevents incompletely folded glycoproteins from exiting to the Golgi complex. Crt also appears to function as an auto-antigen in systemic lupus erythematosus, rheumatoid arthritis, celiac disease, complete congenital heart block, and halothane hepatitis. A diversity of additional functions attributed to Crt includes adhesion, blood function, and cardiac and neuronal development gene expression.

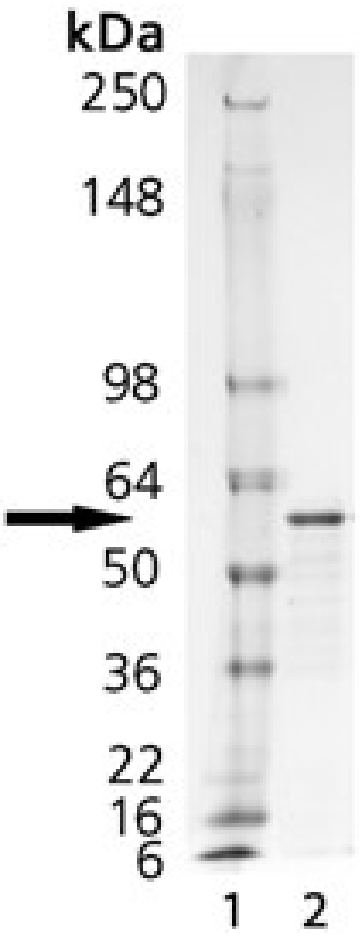
Ordering Information

Order Online »

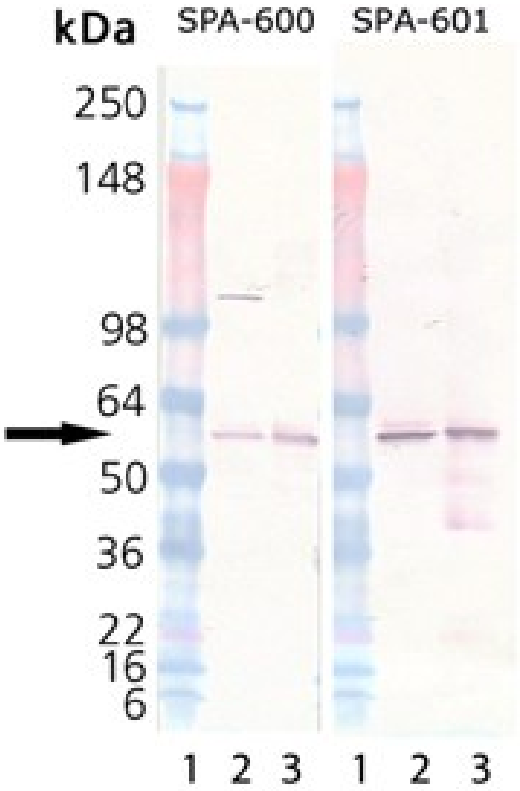
ADI-SPP-600-D	50µg
ADI-SPP-600-F	200µg

Manuals, SDS & CofA

View Online »



SDS-PAGE Analysis of Calreticulin (human), (recombinant) (His-tag). Lane 1: MW Marker; Lane 2: 1µg Calreticulin.



Western Blot Analysis of Calreticulin (human), (recombinant) (His-tag). Lane 1: MW Marker, Lane 2: HeLa lysate (Prod. No. ADI-LYC-HL100), Lane 3: Calreticulin. Probed with Calreticulin pAb (left) or mAb (right).

Handling & Storage

Long Term Storage	-80°C
Shipping	Dry Ice

Regulatory Status RUO - Research Use Only

Product Details

Alternative Name	CALR, CRT
Application Notes	Western blot control.
Formulation	Liquid, In 50mM TRIS, pH 7.5, containing 150mM sodium chloride, 5mM calcium chloride and 5% glycerol.
MW	~59kDa
Purity	≥90% (SDS-PAGE; Western blot)
Purity Detail	Purified by multi-step chromatography.
Source	Produced in *E. coli*. Human calreticulin is fused at the N-terminus to a His-tag.
UniProt ID	P27797

Last modified: October 9, 2025

ENZO LIFE SCIENCES, INC.
Phone: 800.942.0430
info-usa@enzolifesciences.com

European Sales Office
ENZO LIFE SCIENCES (ELS) AG
Phone: +41 61 926 8989
info-eu@enzolifesciences.com

Belgium, The Netherlands & Luxembourg
Phone: +32 3 466 0420
info-be@enzolifesciences.com

France
Phone: +33 472 440 655
info-fr@enzolifesciences.com

Germany
Phone: +49 7621 5500 526
info-de@enzolifesciences.com

UK & Ireland
Phone (UK customers): 0845 601 1488
Phone: +44 1392 825900
info-uk@enzolifesciences.com

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