Calreticulin, human recombinant

CATALOG #: 7570-10 10 µg
7570-50 50 µg

ALTERNATE NAMES: CRP55; Calregulin; Endoplasmic Reticulum Resident Protein 60; ERp60; grp60

SOURCE: E Coli

PURITY: ≥ 90% by SDS-PAGE gel

MOL. WEIGHT: ~55.0 kDa. Human calreticulin (aa 18-417) is fused at the C-terminus to a His-tag.

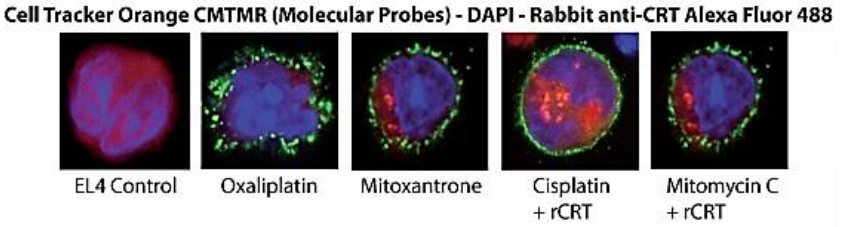
ENDOTOXIN LEVEL: <0.1 EU/µg purified protein (LAL test; Lonza).

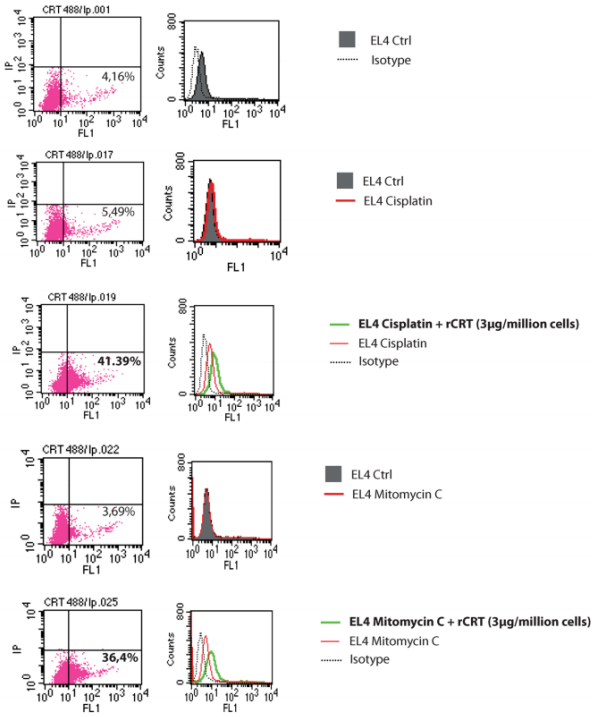
FORM: Liquid

FORMULATION: 0.2 µm-filtered solution in 55 mM Tris-Cl, pH 8.2, containing 150 mM NaCl.

STORAGE CONDITIONS: Prepare aliquots and store at -20°C. Avoid repeated freeze/thaw cycles.

DESCRIPTION: Calreticulin is involved in regulation of intracellular Ca^{2+} homoeostasis and ER Ca^{2+} capacity. It constitutes together with calnexin and ERp57 the 'calreticulin/calnexin cycle' that is responsible for folding and quality control of newly synthesized glycoproteins. Calreticulin has been implicated to play a role in many biological systems, including functions inside and outside the ER, indicating that the protein is a multi-process molecule. Recently, Calreticulin was shown to enhance the merger of macrophages and tumor cells, increasing phagocytosis.





FACS of CRT on the cell surface: 3.10^5 EL4 Thymoma cells, growing in suspension in RPMI 1640 supplemented medium were plated in 12-well plates and treated with mitomycin C (30 mM) or cisplatin (25mM) for 4h. Cells were harvested, washed once with cold PBS and resuspended in 200 mL of cold PBS containing 1 mg of recombinant Calreticulin for 30 minutes on ice. After one wash with cold PBS, cells were fixed in 0.25% PFA in PBS for 5 minutes. After washing again once with cold PBS, cells were incubated for 30 min with primary antibody, diluted in cold blocking buffer (2% FBS in PBS), followed by washing and incubation with the Alexa488-conjugated monoclonal secondary antibody in blocking buffer (30 min). Each sample was then analyzed by FACScan to identify cell-surface Calreticulin. Secondary antibody alone was used as an isotype control, and the fluorescent intensity of stained cells was gated on propidium iodide (PI) negative cells. Pictures courtesy of Prof. Guido Kroemer, INSERM, Paris.

Immunofluorescence: Cells were incubated with rCRT and stained with the same protocol as for FACS analysis. Then, cells resuspended in 100 mL of PBS were seeded on polylysine slides for 15 min, then fixed with 100 mL of 4% PFA add on the cells for 15 min. Drops were gently aspirated before using the mounting medium including DAPI from Vectashield. Slides were then analyzed by confocal microscopy. Oxaliplatin (150mM, Sanofi Aventis) and mitoxanthron (1mM, Sigma) treated cells were used as positive control. Pictures courtesy of Prof. Guido Kroemer, INSERM, Paris.

RELATED PRODUCTS:

- Calreticulin Antibody **(3077-100)**
- Calreticulin Antibody (Clone S75) **(3076-100)**
- Calreticulin Blocking Peptide **(3077BP-50)**

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