



Recombinant Protein Technical Manual  
Recombinant Human Calreticulin-3/CALR3 Protein  
RPES4018

### Product Data:

**Product SKU:** RPES4018

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** Q96L12

### Protein Information:

**Molecular Mass:** 42.9 kDa

**AP Molecular Mass:** 42 kDa

**Tag:**

**Bio-activity:**

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from a 0.2 µm filtered solution of 20mM PB, 150mM NaCl, pH7.4.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Calreticulin-3; calreticulin-2; calsperin; CALR3; CRT2

## Immunogen Information:

**Sequence:** Thr 20-Leu384

## Background:

Calreticulin-3 belongs to the calreticulin family, members of which are calcium binding chaperones localized mainly in the endoplasmic reticulum. It can be divided into a N-terminal globular domain, a proline-rich P-domain forming an elongated arm-like structure and a C-terminal acidic domain. During spermatogenesis process, Calreticulin-3 may act as a lectin-independent chaperone for specific client proteins such as ADAM3. Defects in CALR3 are the cause of familial hypertrophic cardiomyopathy type 19 (CMH19), it is a hereditary heart disorder characterized by ventricular hypertrophy, which is usually asymmetric and often involves the interventricular septum. The symptoms include dyspnea, syncope, collapse, palpitations, and chest pain.