Recombinant Protein Technical Manual

Recombinant Human Calsequestrin/CASQ1 Protein

RPES4009

Product Data:

Product SKU: RPES4009

Size: 20µg

Species: Human

Expression host: E. coli

Uniprot: P31415

Protein Information:

Molecular Mass: 41.8 kDa

AP Molecular Mass: 52 kDa

Tag:

Bio-activity:

Purity: > 80 % as determined by reducing SDS-PAGE.

Endotoxin: Please contact us for more information.

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℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.

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

Formulation: Lyophilized from sterile 50mM Tris, 10% glycerol, pH 7.5

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

Application:

Synonyms: CASQ;PDIB1;VMCQA

Immunogen Information:

Sequence: Gln35-Asp396

Background:

Calsequestrin is an isoform of calsequestrin. Calsequestrin is a calcium-binding protein of the sarcoplasmic reticulum. It helps hold calcium in the cisterna of the sarcoplasmic reticulum after a muscle contraction, even though the concentration of calcium in the sarcoplasmic reticulum is much higher than in the cytosol. Two forms of calsequestrin have been identified: Calsequestrin-2 and Calsequestrin. Calsequestrin is found in fast skeletal muscle. The release of calsequestrin-bound calcium (through a calcium release channel) triggers muscle contraction. The active protein is not highly structured, more than 50% of it adopting a random coil conformation. When calcium binds there is a structural change whereby the alpha-helical content of the protein increases from 3 to 11%. Both forms of calsequestrin are phosphorylated by casein kinase 2, but the cardiac form is phosphorylated more rapidly and to a higher degree. Calsequestrin is also secreted in the gut where it deprives bacteria of calcium ions.