
Recombinant Human Calsequestrin-1 / CASQ1 Protein**Cat.NO.: TP06853**

3th Edition

Synonyms:CASQ;PDIB1;VMCQA

Description:Calsequestrin-1 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-1. Calsequestrin-1 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-1 is also secreted in the gut where it deprives bacteria of calcium ions.

Form:PBS**Molecular Weight:**41.8 kDa**Sequences:**Gln35-Asp396**Purity:**> 95% by HPLC**Concentration:****Endotoxin Level:**<1.0 EU per 1 ug of protein (determined by LAL method)**Storage:**Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.