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**Product Data Sheet**

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Product Name: CASQ2 Dog

Cat. No.: GP23298

Batch No.: 1

**Product Data**

Purity	>98%	Source	Dog Heart.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Calsequestrin-2; Calsequestrin cardiac muscle isoform; CASQ2; CSQ.		
Solubility	It is recommended to reconstitute the lyophilized CASQ2 in sterile 18M-cm H <sub>2</sub> O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	The protein was lyophilized from a concentrated solution (1mg/ml) containing 10mM Tris-HCl and 1mM EGTA.		

**Stability**

Lyophilized CASQ2 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C . Upon reconstitution CASQ2 should be stored at 4°C between 2-7 days and for future use below -18°C .For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Please prevent freeze-thaw cycles.

**Background**

Calsequestrin is the major calcium storage protein of the sarcoplasmic reticulum. Intraluminal Ca<sup>2+</sup> binds to calsequestrin during diastole to prevent Ca<sup>2+</sup> precipitation and to lower its free ionic concentration to facilitate efficient storage. During systole, Calsequestrin coordinately releases ~40-50 Ca<sup>2+</sup> ions per molecule for each contraction-relaxation cycle by an uncertain mechanism. Calsequestrin has been shown to be of major importance in the regulation of cardiac excitation-contraction coupling.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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