

Calsequestrin Rabbit pAb

Catalog # AP99654

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P31415
Other Accession	P31415
Predicted	Rat, Pig, Human, Mouse, Rabbit, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	45160
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Calsequestrin
Epitope Specificity	1-100/396
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	Preservative: 0.02% Proclin300, Constituents: 1% BSA, 0.01M PBS, pH7.4.
SIMILARITY	Belongs to the calsequestrin family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	The sarcoplasmic reticulum (SR) is, in part, responsible for maintaining the level of intracellular calcium in cardiac and skeletal muscle by storing and releasing calcium. Several intralumenal SR calcium binding proteins have been identified, the most prominent of these is calsequestrin. Calsequestrin is a calcium binding protein known to sequester calcium accumulated in the sarcoplasmic reticulum of muscle cells during relaxation and is found discretely localized to the junctional and corbular (terminal cisternae) SR. Calsequestrin functions to localize calcium near the junctional face of the terminal cisternae from which calcium can be released into the cytosol via the ryanodine receptor. This protein is highly acidic and has a large capacity and moderate to low affinity for calcium.

Additional Information

Gene ID	844
Other Names	CASQ; CSQ1; PDIB1; VMCQA; CSQ; CSQ-1; sCSQ; CASQ1_HUMAN; CASQ1; Calmitine; Calsequestrin, skeletal muscle isoform; CASQ1_MOUSE; CASQ1_RAT; Aspartactin; Laminin-binding protein; calsequestrin 1; calsequestrin 1 (fast-twitch, skeletal muscle); calsequestrin 1, fast-twitch, skeletal muscle
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

Protein Information

Name	CASQ1
Synonyms	CASQ
Function	Calsequestrin is a high-capacity, moderate affinity, calcium- binding protein and thus acts as an internal calcium store in muscle (PubMed:28895244). Calcium ions are bound by clusters of acidic residues at the protein surface, often at the interface between subunits. Can bind around 80 Ca(2+) ions (PubMed:28895244). Regulates the release of luminal Ca(2+) via the calcium release channel RYR1; this plays an important role in triggering muscle contraction. Negatively regulates store-operated Ca(2+) entry (SOCE) activity (PubMed:27185316).
Cellular Location	Endoplasmic reticulum Sarcoplasmic reticulum. Sarcoplasmic reticulum lumen {ECO:0000250 UniProtKB:P07221}. Sarcoplasmic reticulum membrane; Peripheral membrane protein; Luminal side {ECO:0000250 UniProtKB:P07221}. Mitochondrion matrix {ECO:0000250 UniProtKB:O09165}. Note=This isoform of calsequestrin occurs in the sarcoplasmic reticulum's terminal cisternae luminal spaces of fast skeletal muscle cells. Preferentially forms linear and round aggregates in the endoplasmic reticulum (ER) of resting cells (PubMed:28895244). In a minority of cells, homogeneously detected in the ER lumen (PubMed:28895244). Colocalizes with STIM1 at endoplasmic reticulum in response to a depletion of intracellular calcium (PubMed:27185316). {ECO:0000250 UniProtKB:P07221, ECO:0000269 PubMed:27185316, ECO:0000269 PubMed:28895244}
Tissue Location	Expressed in myoblasts (at protein level).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.