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CSRP3 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP17004c

Specification

CSRP3 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P50461

CSRP3 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 8048

Other Names
Cysteine and glycine-rich protein 3, Cardiac LIM protein, Cysteine-rich protein 3, CRP3, LIM domain protein, cardiac, Muscle LIM protein, CSRP3, CLP, MLP

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CSRP3 Antibody (Center) Blocking Peptide - Protein Information

Name CSRP3

Synonyms CLP, MLP

Function
Positive regulator of myogenesis. Acts as a cofactor for myogenic bHLH transcription factors such as MYOD1, and probably MYOG and MYF6. Enhances the DNA-binding activity of the MYOD1:TCF3 isoform E47 complex and may promote formation of a functional MYOD1:TCF3 isoform E47:MEF2A complex involved in myogenesis (By similarity). Plays a crucial and specific role in the organization of cytosolic structures in cardiomyocytes. Could play a role in mechanical stretch sensing. May be a scaffold protein that promotes the assembly of interacting proteins at Z-line structures. It is essential for calcineurin anchorage to the Z line. Required for stress-induced calcineurin-NFAT activation (By similarity). The role in regulation of cytoskeleton dynamics by association with CFL2 is reported conflictingly: Shown to enhance CFL2-mediated F-actin depolymerization dependent on the CSRP3:CFL2 molecular ratio, and also shown to reduce the ability of CLF1 and CFL2 to enhance actin depolymerization (PubMed:19752190, PubMed:24934443). Proposed to contribute to the maintenance of muscle cell integrity through an actin-based mechanism. Can directly bind to actin filaments, cross-link actin filaments into bundles without polarity selectivity and protect them from dilution- and cofilin-

mediated depolymerization; the function seems to involve its self- association (PubMed:24934443). In vitro can inhibit PKC/PRKCA activity (PubMed:27353086). Proposed to be involved in cardiac stress signaling by down-regulating excessive PKC/PRKCA signaling (By similarity).

Cellular Location
Nucleus {ECO:0000250|UniProtKB:P50463}. Cytoplasm. Cytoplasm, cytoskeleton Cytoplasm, myofibril, sarcomere, Z line Cytoplasm, myofibril, sarcomere Note=Nucleocytoplasmic shuttling protein. Mainly cytoplasmic. In the Z line, found associated with GLRX3 (By similarity) {ECO:0000250|UniProtKB:P50462, ECO:0000250|UniProtKB:P50463}

Tissue Location
Cardiac and slow-twitch skeletal muscles. Isoform 2 is expressed in striated muscle. Isoform 2 is specifically expressed at higher levels in patients with neuromuscular diseases, such as limb-girdle muscular dystrophy 2A (LGMD2A), Duchenne muscular dystrophy (DMD) and dermatomyositis (PubMed:24860983)

CSRP3 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CSRP3 Antibody (Center) Blocking Peptide - Images

CSRP3 Antibody (Center) Blocking Peptide - Background

This gene encodes a member of the CSRP family of LIMdomain proteins, which may be involved in regulatory processesimportant for development and cellular differentiation. TheLIM/double zinc-finger motif found in this protein is found in agroup of proteins with critical functions in gene regulation, cellgrowth, and somatic differentiation. Mutations in this gene arethought to cause heritable forms of hypertrophic cardiomyopathy(HCM) and dilated cardiomyopathy (DCM) in humans. Alternativelyspliced transcript variants with different 5' UTR, but encoding thesame protein, have been found for this gene.

CSRP3 Antibody (Center) Blocking Peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Zimmerman, R.S., et al. Genet. Med. 12(5):268-278(2010)Rampersaud, E., et al. Ann. Hum. Genet. 74(2):110-116(2010)Talmud, P.J., et al. Am. J. Hum. Genet. 85(5):628-642(2009)Moller, D.V., et al. Eur. J. Heart Fail. 11(11):1031-1035(2009)