



Cardiotin (SR-3)

CATALOG NUMBER: MUB0309P
CLONE: SR-3
SPECIES / ISOTYPE: mouse IgM
PRODUCT FORM: purified monoclonal antibody

BACKGROUND

Cardiotin is a high molecular weight protein complex (300 kDa) located in the mitochondria of cardiomyocytes and skeletal muscle. The cardiotin structure exists of subunits of 60 kDa and 100 kDa, probably in a tetrameric configuration. Both subunits contain the same amino-terminal 14 amino-acid sequence, showing high homology to human skeletal muscle α -actinin.

During cardiac contractile dysfunction and myocard cell differentiation, the cardiotin distribution is affected. Compared to other structural proteins, cardiotin is one of the first to respond to insults (ischemia, fibrillation) that influence the functional status of cardiomyocytes.

SOURCE

SR-3 is a mouse monoclonal IgM antibody derived by fusion of SP2/0-Ag14 mouse myeloma cells with spleen cells from a BALB/c mouse immunized with the 100 kDa cardiotin subunit.

PRODUCT

Each vial contains 100 μ l 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

SPECIFICITY

SR-3 reacts with cardiotin, a mitochondrion-associated protein, which is present in cardiomyocytes and skeletal muscle, but also in epithelial cells and tissues.

SR-3 is useful for immunohistochemistry on frozen sections and immunoblotting. In immunoblotting assays SR-3 reacts with the 300 kDa cardiotin protein complex and its 100 kDa and 60 kDa subunits. Optimal antibody dilution should be determined by titration; recommended range is 1:100 – 1:200 for immunohistochemistry with avidin-biotinylated horseradish peroxidase complex (ABC) as detection reagent, and 1:100 – 1:500 for immunoblotting applications.

SPECIES REACTIVITY

Human and swine.

STORAGE

Store at 4°C, or in small aliquots at –20°C.

REFERENCES

1. Schaart, G., Moens, L., Endert, J. M., and Ramaekers, F. C. (1997). Biochemical characterization of cardiotin, a sarcoplasmic reticulum associated protein, FEBS Lett 403, 168-72.

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WARNING and CAUTION

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals.

This product contains sodium azide. To prevent formation of toxic vapors, do not mix with strong acidic solutions. To prevent formation of potentially explosive metallic azides in metal plumbing, always wash into drain with copious quantities of water.

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