SANTA CRUZ BIOTECHNOLOGY, INC.

Cardiotin (SR-4): sc-58712

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cardiotin is a high molecular weight protein complex located in the mitochondrial membrane. The Cardiotin structure exists as two subunits, both of which contain the same N-terminal 14 amino acid sequence, showing high homology to human skeletal muscle α-actinin. This suggests that the tetrameric configuration of the Cardiotin protein structure is a transmembrane complex with the N-terminus at the cytoplasmic side of the membrane, able to interact with Actin. During cardiac contractile dysfunction, Cardiotin distribution is affected in pathlogical cardiomyocytes, such as chronic ischemic myocardium. The Cardiotin monoclonal antibody can be used in immunohistochemistry for the detection of a disturbed mitochondrial activity in cardiomyocytes, such as during chronic ischemia or chronic atrial fibrillation.

REFERENCES

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6. Dispersyn, G.D., Mesotten, L., Meuris, B., Maes, A., Mortelmans, L., Flameng, W., Ramaekers, F. and Borgers, M. 2002. Dissociation of cardiomyocyte apoptosis an zones. Eur. Heart J. 23: 849-857.

SOURCE

Cardiotin (SR-4) is a mouse monoclonal antibody raised against full length Cardiotin of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Cardiotin (SR-4) is recommended for detection of Cardiotin of human and porcine origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Cardiotin subunits under reducing conditions: 60/100 kDa.

Molecular Weight of Cardiotin under non-reducing conditions: 300 kDa.

Positive Controls: A-673 cell lysate: sc-2414.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RESEARCH USE

For research use only, not for use in diagnostic procedures.