

OriGene Technologies, Inc.

9620 Medical Center Drive, Ste 200 Rockville, MD 20850 UNITED STATES Phone: +1-888-267-4436 Fax: +1-301-340-8606 techsupport@origene.com

OriGene Technologies GmbH

Schillerstr. 5 32052 Herford GERMANY Phone: +49-5221-34606-0 Fax: +49-5221-34606-11 info-de@origene.com

BM6043P Monoclonal Antibody to Cardiotin - Purified Quantity: 0.1 mg Concentration: 1 mg/ml

Concentration:	1 mg/ml
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 a-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.
Host / Isotype:	Mouse / IgM
Recommended Isotype Controls:	SM13P
Clone:	R2G
Immunogen:	Total protein extract of Chicken gizzard.
Format:	State: Liquid purified IgG fraction Buffer System: PBS with 0.09% Sodium Azide as preservative
Applications:	Immunoblotting. Immunohistochemistry on Frozen Sections. Immunohistochemistry on Paraffin-Embedded tissue. Recommended Dilutions: 1/25–1/100 for immunohistochemistry with avidinbiotinylated horseradish peroxidase complex (ABC) as detection reagent and 1/25–1/500 for Immunoblotting applications. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	R2G recognizes the 300 kDa cardiotin protein complex and its 100 kDa and 60 kDa subunits. This antibody reacts with Canine, Feline, Goat, Hamster, Human, Monkey, Mouse, Rabbit, Rat, Xenopus, Zebrafish tissues.
Storage:	Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer. Avoid repeated freeze-thaw cycles. Shelf life: One year from despatch.
General Readings:	 Schaart G, van der Ven PF, Ramaekers FC. Characterization of cardiotin, a structural component in the myocard. Eur J Cell Biol. 1993 Oct;62(1):34-48. PubMed PMID: 8269977. Schaart G, Moens L, Endert JM, Ramaekers FC. Biochemical characterization of cardiotin, a sarcoplasmic reticulum associated protein. FEBS Lett. 1997 Feb 17;403(2):168-72. PubMed PMID: 9042960. Ausma J, Wijffels M, van Eys G, Koide M, Ramaekers F, Allessie M, et al.

3. Ausma J, Wijffels M, van Eys G, Koide M, Ramaekers F, Allessie M, et al.

For research and in vitro use only. Not for diagnostic or therapeutic work. Material Safety Datasheets are available at www.acris-antibodies.com or on request.

Pictures:

Dedifferentiation of atrial cardiomyocytes as a result of chronic atrial fibrillation. Am J Pathol. 1997 Oct;151(4):985-97. PubMed PMID: 9327732.

4. Dispersyn GD, Geuens E, Ver Donck L, Ramaekers FC, Borgers M. Adult rabbit cardiomyocytes undergo hibernation-like dedifferentiation when co-cultured with cardiac fibroblasts. Cardiovasc Res. 2001 Aug 1;51(2):230-40. PubMed PMID: 11470462.

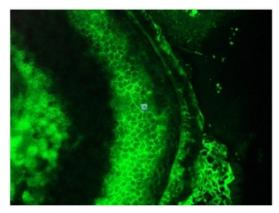
5. Ausma J, Litjens N, Lenders MH, Duimel H, Mast F, Wouters L, et al. Time course of atrial fibrillation-induced cellular structural remodeling in atria of the goat. J Mol Cell Cardiol. 2001 Dec;33(12):2083-94. PubMed PMID: 11735256.

6. Dispersyn GD, Mesotten L, Meuris B, Maes A, Mortelmans L, Flameng W, et al. Dissociation of cardiomyocyte apoptosis and dedifferentiation in infarct border zones. Eur Heart J. 2002 Jun;23(11):849-57. PubMed PMID: 12042006.

7. Ausma J, van der Velden HM, Lenders MH, van Ankeren EP, Jongsma HJ, Ramaekers FC, et al. Reverse structural and gap-junctional remodeling after prolonged atrial fibrillation in the goat. Circulation. 2003 Apr 22;107(15):2051-8. Epub 2003 Apr 7. PubMed PMID: 12681996.

8. Pochampally RR, Neville BT, Schwarz EJ, Li MM, Prockop DJ. Rat adult stem cells (marrow stromal cells) engraft and differentiate in chick embryos without evidence of cell fusion. Proc Natl Acad Sci U S A. 2004 Jun 22;101(25):9282-5. Epub 2004 Jun 14. PubMed PMID: 15197249.

Immunofluorescence staining of a 7 days old Zebrafish embryo.



For research and in vitro use only. Not for diagnostic or therapeutic work. Material Safety Datasheets are available at www.acris-antibodies.com or on request.