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Product Information

Anti-Myocardin
produced in rabbit, affinity isolated antibody

Catalog Number **SAB4200539**

Product Description
Anti-Myocardin is produced in rabbit using as immunogen a synthetic peptide corresponding to an internal sequence of human myocardin (GeneID: 93649), conjugated to KLH. The corresponding sequence is identical in human myocardin isoform 2 and in rat and mouse myocardin. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Myocardin specifically recognizes human, rat and chicken myocardin. The antibody may be used in several immunochemical techniques including immunoblotting (~107 kDa), immunofluorescence and immunohistochemistry. Detection of the myocardin band by immunoblotting is specifically inhibited by the myocardin immunizing peptide.

Development of cardiac muscle, skeletal muscle and smooth muscle cells is accompanied by transcriptional activation of overlapping though distinct sets of muscle-specific genes. The myocardin gene (*MYOCD*) is expressed in a precise developmentally regulated, lineage-restricted pattern in the embryo and during postnatal development.[1] Myocardin is a smooth and cardiac muscle-specific transcriptional coactivator of serum response factor (SRF).[1,2] It regulates BMP10 expression and is required for cardiac development, as well as cardiomyocyte survival and maintenance of heart function.[3] Myocardin is a direct transcriptional target of Mef2, Tead and FOXO during cardiovascular development.[4] In turn myocardin regulates the expression of a set of cardiac and smooth muscle-specific genes. Myocardin contains a conserved SAP (SAF-A/B, Acinus, and PIAS) domain, that may regulate nuclear organization, chromosomal dynamics and apoptosis.[1,2,5] Myocardin has also been implicated in the pathogenesis of atherosclerosis, Alzheimer's disease and malignant transformation.[6,7]

Reagent
Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.0 mg/mL

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile
Immunoblotting: a working concentration of 1.5-3.0 µg/mL is recommended using extracts of Hct116 cells.

Immunofluorescence: a working concentration of 2-4 µg/mL is recommended using A10 cells.

Immunohistochemistry: a working concentration of 5-10 µg/mL is recommended using human and chicken heart.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References
1. Wang, Z., et al., *Proc. Natl. Acad. Sci. USA*, **100**, 7129-7134 (2003).
2. Pipes, G.C., et al., *Genes Dev.*, **20**, 1540-1556 (2006).
3. Huang, J., et al., *J. Clin. Invest.*, **122**, 3678-3691 (2012).
4. Creemers, E.E., et al., *Dev.*, **133**, 4245-4256 (2006).
5. Du, K.L., et al., *Mol. Cell. Biol.*, **23**, 2425-2437 (2003).

6. Shats, I., et al., *Cell Cycle,* **6**, 1141-1146 (2007).

7. Chow, N., et al., *Proc. Natl. Acad. Sci. USA*, **104**, 823-828 (2007).

ER,RC,PHC 01/13-1