

Product datasheet

anti-Cardiac Actin mouse monoclonal, AC1-20.4.2, lyophilized, purified

Short overview

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|----------------------|---|
| Cat. No. | 61075 |
| Quantity | 50 µg |
| Concentration | 50 µg/ml after reconstitution with 1 ml dist. water |

Product description

| | |
|--------------------------------------|--|
| Host | Mouse |
| Antibody Type | Monoclonal |
| Isotype | IgG1 |
| Clone | AC1-20.4.2 |
| Immunogen | Synthetic NH2 terminus decapeptide of cardiac isoform of actin |
| Formulation | Lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4) |
| UniprotID | P68034 (Chicken), P68032 (Human), G1STB6 (Rabbit) |
| Synonym | Actin, alpha cardiac muscle 1, Alpha-cardiac actin [Cleaved into: Actin, alpha cardiac muscle 1, intermediate form], ACTC1, ACTC |
| Conjugate | Unconjugated |
| Purification | Affinity chromatography |
| Storage before reconstitution | 2-8°C until indicated expiry date |
| Storage after reconstitution | Up to 3 months at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles |
| Intended use | Research use only |
| Application | IHC, WB |
| Reactivity | Bovine, Chicken, Human, Mouse, Rabbit |

Applications

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|--|--|
| Immunohistochemistry (IHC) - frozen | 1:10 (5 µg/ml; include 0.5 M NaCl in all washing buffers to enhance specificity) |
| Immunohistochemistry (IHC) - paraffin | 1:10 (5 µg/ml; microwave treatment recommended) |
| Western Blot (WB) | 1:1,000 (50 ng/ml; include 1 M NaCl in all washing buffers to enhance specificity) |

Background

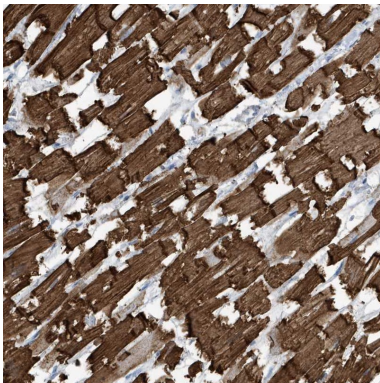
Ac1 represents an excellent marker for cardiac tissue; it discriminates fetal (cardiac) a-actin from all other actin isoforms. Fetal actin can be localized in regenerating skeletal muscle after injury (in satellite cells) and in veins of the umbelical cord. Mab Ac1-20.4.2 shows no cross reaction

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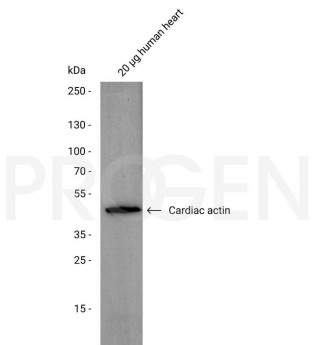
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with other actin isoforms present in skeletal and smooth muscle, provided that stringent experimental conditions have been applied. Polypeptide reacting: Specific for fetal (cardiac) isoform of actin.

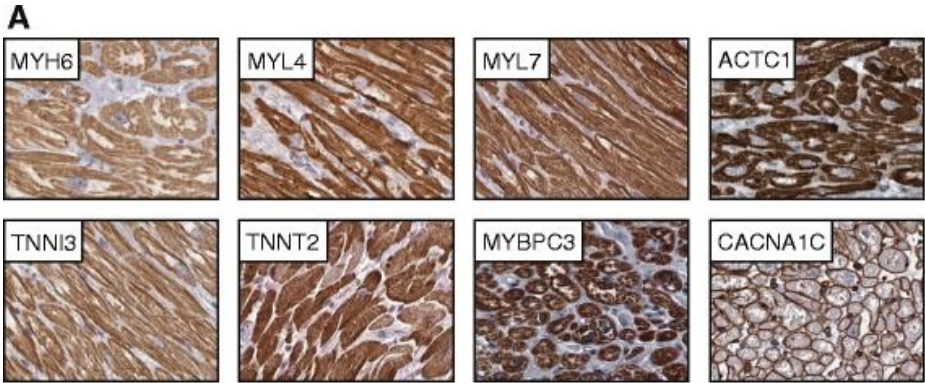
Product images



anti-Cardiac Actin mouse monoclonal, AC1-20.4.2, lyophilized, purified

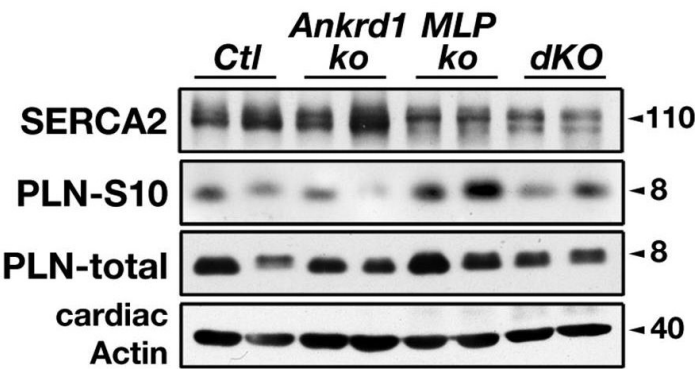


Western blot analysis of human heart whole tissue lysate and with anti-Cardiac Actin antibody. Western blot analysis was performed on 20 µg human heart lysate. The PVDF membrane was blocked with 5% milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-Cardiac Actin mouse monoclonal, AC1-20.4.2 (Cat. No. 690075) was diluted in blocking buffer (antibody concentration 0.05 µg/ml) and incubated for 1 h at RT. The secondary antibody anti-mouse IgG, HRP conjugate was also diluted in blocking buffer (antibody concentration 0.2 µg/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using Pierce™ ECL Western Blotting Substrate.



[Lindskog, C., LinnÃ©, J., et al. The human cardiac and skeletal muscle proteomes defined by transcriptomics and antibody-based profiling. BMC Genomics. 2015-06-25.](#) Species/Reactant: Homo sapiens (Human) Applications: Immunohistochemistry Image collected and cropped by CiteAb from the following publication, provided under a CC-BY licence.

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[Marrocco, V., Bogomolovas, J., et al. PKC and PKN in heart disease. J Mol Cell Cardiol. 2019-03-01.](#) Species/Reactant: Mus musculus (House mouse)Applications: Western BlottingImage collected and cropped by CiteAb from the following publication, provided under a CC-BY licence.

References

| Publication | Species | Application |
|--|---------|------------------------------|
| Franke, W. W. et al. Specific immunohistochemical detection of cardiac/fetal α-actin in human cardiomyocytes and regenerating skeletal muscle cells. Differentiation 60, 245-250 (1996). | human | IHC (frozen), IHC (paraffin) |
| Rudy, D. E., Yatskievych, T. A., Antin, P. B. & Gregorio, C. C. Assembly of thick, thin, and titin filaments in chick precardiac explants. Dev. Dyn. 221, 61-71 (2001). | chicken | ICC-IF |
| Domke, L and Franke, W. The cell-cell junctions of mammalian testes... Cell Tissue Res, 375, 451-482, (2019) | bovine | ICC-IF |
| Lindskog, C. et al. The human cardiac and skeletal muscle proteomes defined by transcriptomics and antibody-based profiling. BMC Genomics 16, 475 (2015). | human | IHC |
| Marrocco, V. et al. PKC and PKN in heart disease. J.Mol.Cell.Cardiol. 128, 212-226 (2019) | mouse | WB |