Product datasheet

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

Short overview

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)
Synomym	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

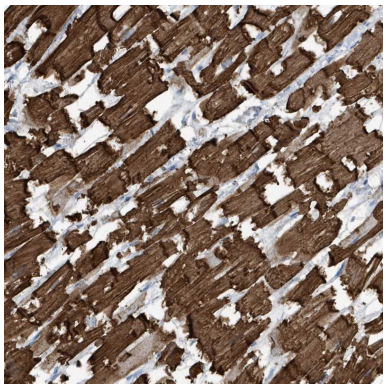
Immunohistochemistry (IHC) - frozen	1:10 (5 µg/ml; include 0.5 M NaCl in all washing buffers to enhance specificity)
Immunohistochemistry (IHC) - paraffin	1:10 (5 µg/ml; microwave treatment recommended)
Western Blot (WB)	1:1,000 (50 ng/ml; include 1 M NaCl in all washing buffers to enhance specificity)

Background

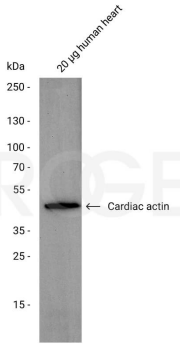
Ac1 represents an excellent marker for cardiac tissue; it discriminates fetal (cardiac) a-actin from all other actin isoforms. Fetal actin can be localized in regenerating skeletal muscle after injury (in satellite cells) and in veins of the umbelical cord. Mab Ac1-20.4.2 shows no cross reaction

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.

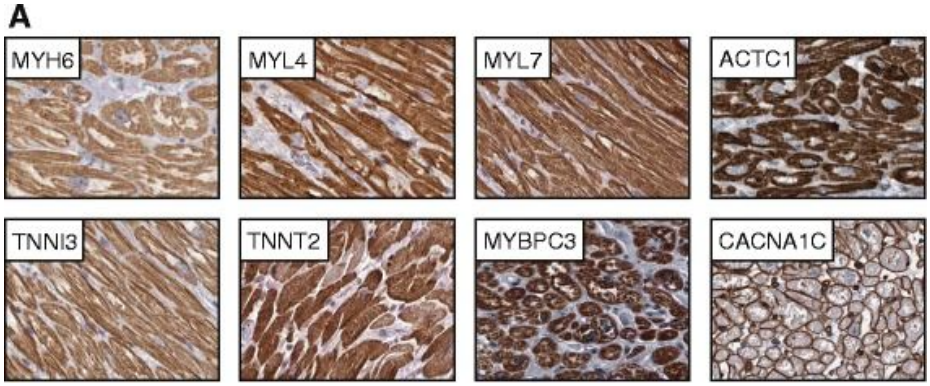
Product images



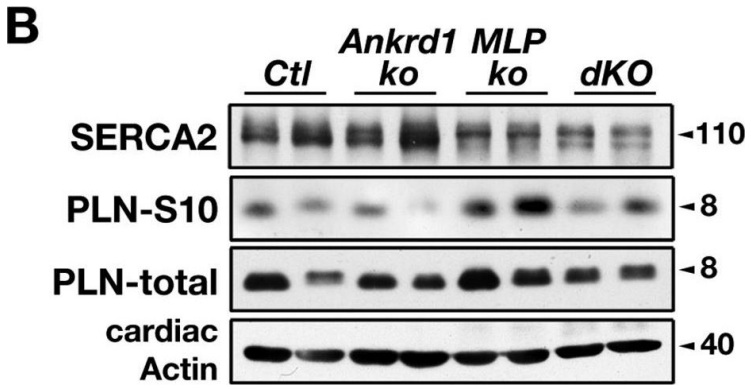
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Western blot analysis of human heart whole tissue lysate and with anti-Cardiac Actin antibody. Western blot analysis was performed on 20 µg human heart lysate. The PVDF membrane was blocked with 5% milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. 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 PierceTM 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: ImmunohistochemistryImage collected and cropped by CiteAb from the following publication, provided under a CC-BY licence.



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
Domke, L and Franke, W. The cell-cell junctions of mammalian testes.., Cell Tissue Res, 375, 451-482, (2019)	bovine	ICC-IF
Marrocco, V. et al. PKC and PKN in heart disease. J.Mol.Cell.Cardiol. 128, 212-226 (2019)	mouse	WB
Kant, S. et al. Desmoglein 2 mutation provokes skeletal muscle actin expression and accumulation at intercalated discs in murine hearts. J.Cell.Sci. 132, (2019)	mouse	IHC-IF (paraffin)
Hernandez, D. A. et al. Nebulette is a powerful cytolinker organizing desmin and actin in mouse hearts. Mol. Biol. Cell 27, mbc.E16-04-0237 (2016).	mouse	WB
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