

Anti-Alpha-cardiac actin Antibody

0407-3



Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Zebrafish
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 42 kDa

Description: Actins are highly conserved proteins expressed in all eucaryotic cells. Actin filaments form part of the cytoskeleton and play essential roles in regulating cell shape and movement. Six distinct actin isotypes have been identified in mammalian cells. Each is encoded by a separated gene and is expressed in a developmentally regulated and tissue-specific manner, alpha and beta cytoplasmic actins are expressed in a wide variety of cells; whereas, expression of alpha skeletal, alpha cardiac, alpha vascular, and gamma enteric actins are more restricted to specialized muscle cell type. Smooth muscle alpha actin is of further interest because it is one of a few genes whose expression is relatively restricted to vascular smooth muscle cells. Further more, expression of smooth muscle alpha actin is regulated by hormones, cell proliferation, and altered by pathological conditions including oncogenic transformation and atherosclerosis

Immunogen: Synthetic peptide within Human alpha-Actin (cardiac actin) aa 1-50 / 377.

Positive control: Rat heart tissue lysate, Mouse heart tissue lysate, hybrid fish (crucian-carp) heart tissue lysates, human heart tissue, mouse heart tissue, rat heart tissue.

Subcellular location: Cytoplasm, etc.

Database links: SwissProt: P68032 Human | P68033 Mouse
Entrez Gene: 29275 Rat

Recommended Dilutions:

WB	1:500-1:1,000
IHC-P	1:400

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4°C. Store at +4°C short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20°C long term.

Purity: Immunogen affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders: 0086-571-88062880

Technical: 0086-571-89986345

Service mail: support@huabio.cn

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Applications: WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

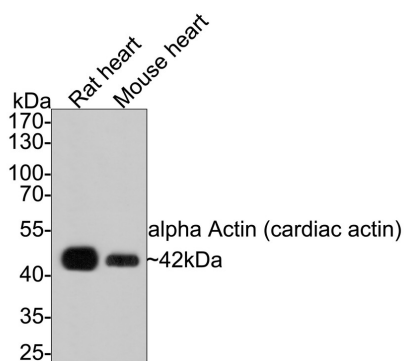


Fig1: Western blot analysis of Alpha-cardiac actin on different lysates with Rabbit anti-Alpha-cardiac actin antibody (0407-3) at 1/500 dilution.

Lane 1: Rat heart tissue lysate

Lane 2: Mouse heart tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 42 kDa

Observed band size: 42 kDa

Exposure time: 2 minutes;

10% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (0407-3) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:300,000 dilution was used for 1 hour at room temperature.

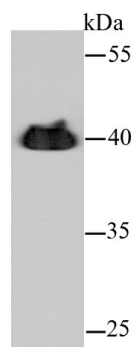


Fig2: Western blot analysis of Alpha-cardiac actin on hybrid fish (crucian-carp) heart tissue lysate using anti-Alpha-cardiac actin antibody at 1/500 dilution.

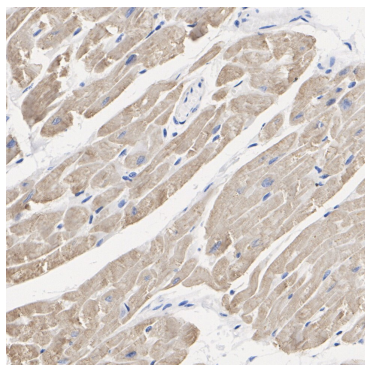


Fig3: Immunohistochemical analysis of paraffin-embedded human heart tissue with Rabbit anti-Alpha-cardiac actin antibody (0407-3) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (0407-3) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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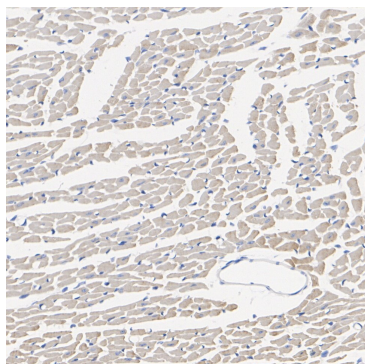


Fig4: Immunohistochemical analysis of paraffin-embedded mouse heart tissue with Rabbit anti-Alpha-cardiac actin antibody (0407-3) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (0407-3) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

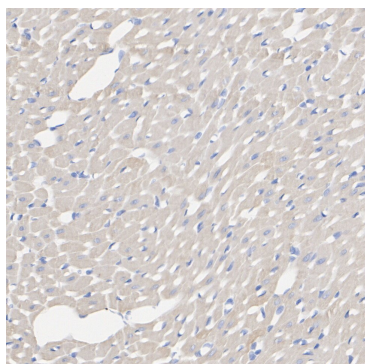


Fig5: Immunohistochemical analysis of paraffin-embedded rat heart tissue with Rabbit anti-Alpha-cardiac actin antibody (0407-3) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (0407-3) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. The MGC Project Team. Genome Res. 14:2121-2127(2004).
2. Leader D.P., Gall I., Campbell P.C. Biosci. Rep. 6:741-747(1986).
3. Carninci P., Kasukawa T., Katayama S.etc. Science 309:1559-1563(2005).

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