

# ACTN2 Polyclonal antibody

Catalog Number: 14221-1-AP

17 Publications

## Basic Information

## Catalog Number:

14221-1-AP

## Size:

650 µg/ml

## Source:

Rabbit

## Isotype:

IgG

## Immunogen Catalog Number:

AG5459

## GenBank Accession Number:

BC051770

## GeneID (NCBI):

88

## UNIPROT ID:

P35609

## Full Name:

actinin, alpha 2

## Calculated MW:

104 kDa

## Observed MW:

103 kDa

## Purification Method:

Antigen affinity purification

## Recommended Dilutions:

WB 1:5000-1:50000

IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate

IHC 1:500-1:2000

IF 1:200-1:800

## Applications

## Tested Applications:

IF/ICC, IHC, IP, WB, ELISA

## Cited Applications:

IF, IHC, WB

## Species Specificity:

human, mouse, rat

## Cited Species:

human, rat, mouse

**Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## Positive Controls:

**WB**: mouse brain tissue, C2C12 cells, mouse lung tissue, mouse skeletal muscle tissue, mouse heart, mouse kidney, rat skeletal muscle

**IP**: HeLa cells,

**IHC**: mouse heart tissue, mouse skeletal muscle tissue

**IF**: mouse heart tissue, C2C12 cells, NIH/3T3 cells, Human iPSC derived cardiomyocyte

## Background Information

Alpha actinin 2 (ACTN2) belongs to the alpha-actinin family and is expressed in both skeletal and cardiac muscles and functions to anchor myofibrillar actin thin filaments and titin to Z-discs (PMID: 30701273). ACTN2 is an actin-binding protein with multiple roles in different cell types. In nonmuscle cells, the cytoskeletal isoform is found along microfilament bundles and adherens-type junctions, where it is involved in binding actin to the membrane. In contrast, skeletal, cardiac, and smooth muscle isoforms are localized to the Z disc and analogous dense bodies, where they help anchor the myofibrillar actin filaments. Mutations in ACTN2 are associated with hypertrophic cardiomyopathy, as well as dilated cardiomyopathy and endocardial fibroelastosis (PMID: 20022194, 14567970).

## Notable Publications

Author	Pubmed ID	Journal	Application
Xueling He	28969971	Prog Biophys Mol Biol	WB
Maike Schuldt	33148509	J Mol Cell Cardiol	IF
Qianqian Liang	36413948	Dev Cell	IF

## Storage

## Storage:

Store at -20°C. Stable for one year after shipment.

## Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

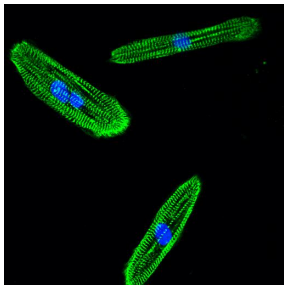
For technical support and original validation data for this product please contact:

T: 4006900926

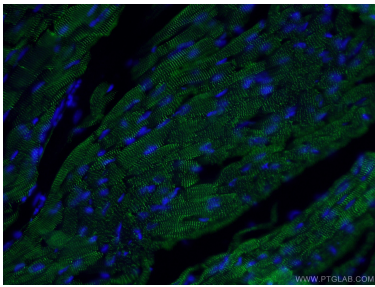
E: [Proteintech-CN@ptglab.com](mailto:Proteintech-CN@ptglab.com)W: [ptgcn.com](http://ptgcn.com)

**This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.**

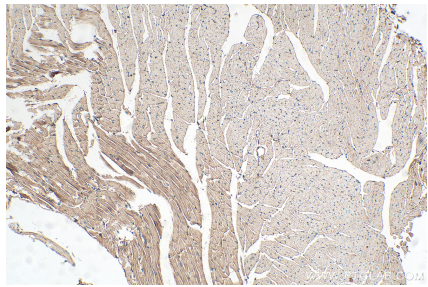
Selected Validation Data



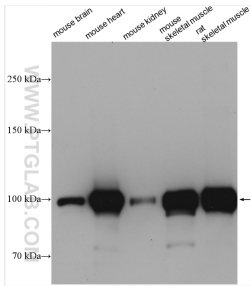
Human iPSC derived cardiomyocyte in 2D culture, with alpha actinin (14221-1-AP) and DAPI. Image courtesy of Chandan Kadir Nagaraju, Experimental Cardiology, KU Leuven, Belgium.



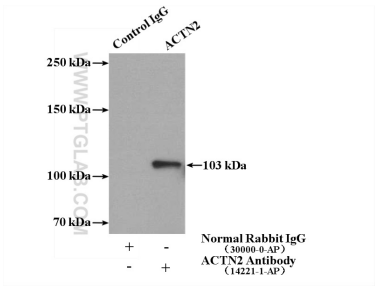
Immunofluorescent analysis of (4% PFA) fixed mouse heart tissue using 14221-1-AP (ACTN2 antibody) at dilution of 1:400 and Alexa Fluor 488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



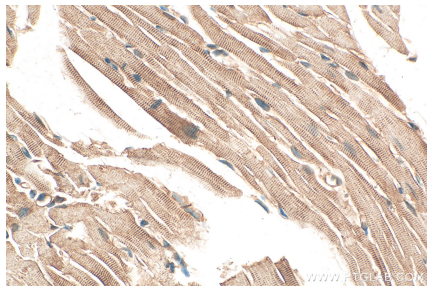
Immunohistochemical analysis of paraffin-embedded mouse heart tissue slide using 14221-1-AP (ACTN2 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



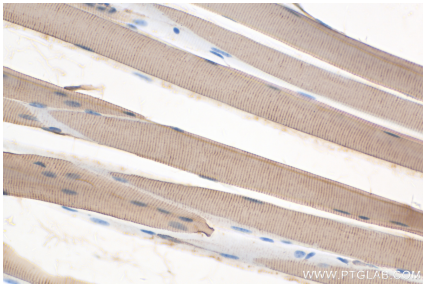
Various lysates were subjected to SDS PAGE followed by western blot with 14221-1-AP (ACTN2 antibody) at dilution of 1:30000 incubated at room temperature for 1.5 hours.



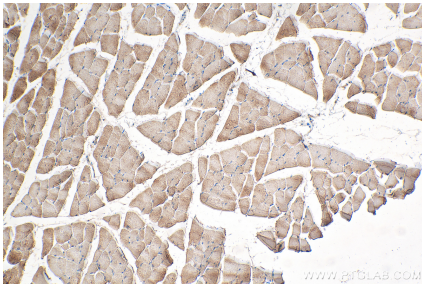
IP result of anti-ACTN2 (IP:14221-1-AP, 4ug; Detection:14221-1-AP 1:1000) with HeLa cells lysate 1080ug.



Immunohistochemical analysis of paraffin-embedded mouse heart tissue slide using 14221-1-AP (ACTN2 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue slide using 14221-1-AP (ACTN2 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue slide using 14221-1-AP (ACTN2 antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).