Product Datasheet

Actin Alpha 1 Cardiac Muscle Antibody (EP184E)
NB110-55441

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

www.novusbio.com technical@novusbio.com

Publications: 3

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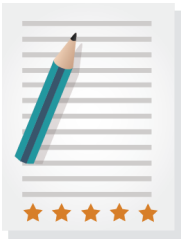


NB110-55441

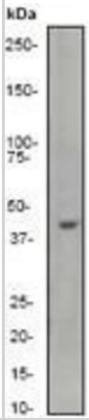
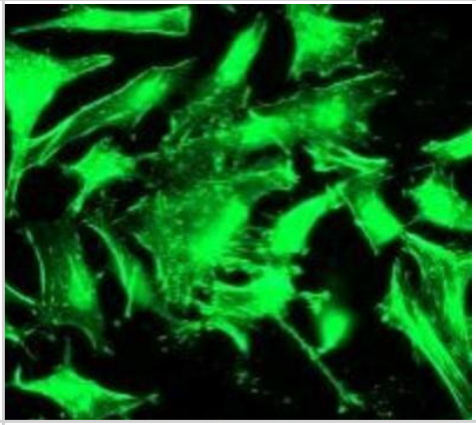
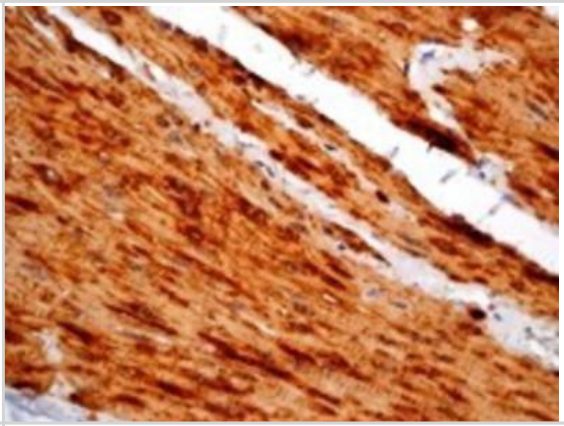
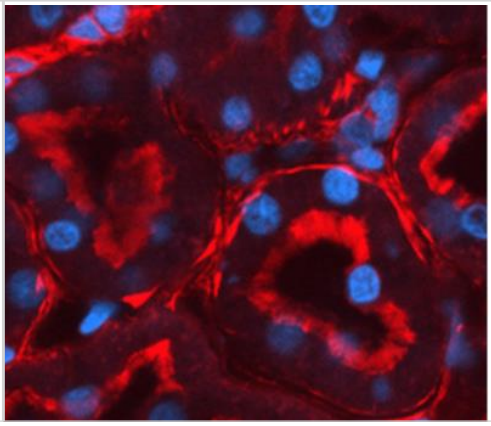
Actin Alpha 1 Cardiac Muscle Antibody (EP184E)

Product Information	
Unit Size	0.1 ml
Concentration	This product is unpurified. The exact concentration of antibody is not quantifiable.
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	EP184E
Preservative	0.01% Sodium Azide
Isotype	IgG
Purity	Tissue culture supernatant
Buffer	49% PBS, 0.05% BSA and 50% Glycerol

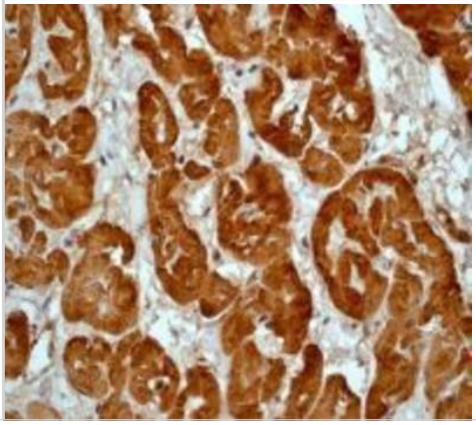
Product Description	
Host	Rabbit
Gene ID	70
Gene Symbol	ACTC1
Species	Human, Mouse, Rat, Bovine
Specificity/Sensitivity	This Actin antibody recognizes all muscle actins.
Immunogen	A synthetic peptide corresponding to residues near the N-terminus of human Actin was used as an immunogen.
Notes	Produced using Abcam's RabMab® technology. RabMab® technology is covered by the following U.S. Patents, No. 5,675,063 and/or 7,429,487.

Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation
Recommended Dilutions	Western Blot 1:1000-10000, Flow Cytometry 1:20, Immunohistochemistry 1:100 - 1:500, Immunocytochemistry/Immunofluorescence 1:250-500, Immunoprecipitation 1:20, Immunohistochemistry-Paraffin 1:100-200, Immunohistochemistry-Frozen 1:500
Application Notes	This product is useful for: Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry, Immunoprecipitation, Flow Cytometry. In Western blot this antibody detects a band at approximately 42kDa.

Images

Western Blot: Actin Alpha 1 Cardiac Muscle Antibody (EP184E) [NB110-55441] - A431 cell lysate using a 1:1,000 dilution.	
Immunocytochemistry/Immunofluorescence: Actin Alpha 1 Cardiac Muscle Antibody (EP184E) [NB110-55441] - HeLa cells.	
Immunohistochemistry-Paraffin: Actin Alpha 1 Cardiac Muscle Antibody (EP184E) [NB110-55441] - Human skeletal muscle.	
Immunohistochemistry-Frozen: Actin Alpha 1 Cardiac Muscle Antibody (EP184E) [NB110-55441] - Analysis of rat kidney tubule tissue, staining muscle Actin.	

Immunohistochemistry: Actin Alpha 1 Cardiac Muscle Antibody (EP184E) [NB110-55441] - Immunohistochemical staining of paraffin-embedded human cardiac muscle using anti-Actin



Publications

Kumar Ashok, Kremer Kimberly N, Dominguez Daniel et al. Ga13 and Rho mediate endosomal trafficking of CXCR4 into Rab11+ vesicles upon stromal cell-derived factor-1 stimulation. Journal of Immunology (Baltimore, Md. : 1950) 2011 [PMID: 21148034] (WB, Mouse)

Bhattacharya R, Gonzalez AM, Debiase PJ et al. Recruitment of vimentin to the cell surface by beta3 integrin and plectin mediates adhesion strength. J Cell Sci 2009 May [PMID: 19366731]

Wang J, Hu H, Wang S et al. The important role of actinin-like protein (AcnA) in cytokinesis and apical dominance of hyphal cells in Aspergillus nidulans. Microbiology 2009 Aug [PMID: 19443549]

Procedures

Protocol specific for pan Actin Antibody (NB110-55441)

  Immunohistochemistry Protocol for Paraffin-embedded Tissues

 1. Solutions and reagents

 1.1. Xylene

 1.2. Ethanol, anhydrous denatured, histological grade (100%, 95%, 70%)

 1.3. Washing buffer:
 TBST washing buffer: 1XTBS/0.1% Tween-20
 To prepare stock solution of 10X TBS: add 24.2 g Trizma base and 80 g sodium chloride to 1L of dH2O. Adjust pH to 7.6.
 Working solution. 1XTBST/0.1% Tween-20: add 100ml 10XTBS to 900 ml dH2O. Add 1 ml Tween-20 and mix well.

 1.4. Distilled water (dH2O)

 1.5. Antigen Retrieval Solution:
 0.01M Sodium Citrate Buffer, pH 6.0

 To prepare stock solutions:
 Solution A. 0.1 M citric acid solution: dissolve 21.0 g of citric acid, monohydrate (C6H8O7.H2O) in 1 liter of dH2O.
 Solution B. 0.1M sodium citrate solution: dissolve 29.4 g trisodium citrate dihydrate (C6H5Na3O7.2H2O) in 1 liter of dH2O.
 Working solution: Add 9 ml of Stock solution A and 41 ml of stock solution B to 450 ml of dH2O. Adjust pH to 6.0.

 1.6. 3% Hydrogene Peroxide

 1.7. Blocking buffer:
 PBS (Dulbeccos Phosphate Buffered Salts, 1X, catalog #21-031-CV from Mediatech, Inc.) + 10% serum (serum origin depends on the host of the secondary antibody)

 1.8. Hematoxylin QS (catalog #H-3404 from Vector Laboratories, Inc.)

 1.9. Permanent Mounting medium (VectaMount, catalog# H-5000 Vector Laboratories, Inc.)

 2. Protocol

 2.1. Deparaffinization/Rehydration

 2.1.1. Heat slides in an oven at 65C for 1 hour.

 2.1.2. De-paraffinize/hydrate using the following series of washes: two Xylene washes (5 min each), followed by two 100% ethanol rinses (5 min each), followed by 95% ethanol, 70% ethanol, 50% ethanol, 30% ethanol, followed by H2O and a TBST wash for 5 min on a shaker.

 2.2. Antigen Retrieval

 2.2.1. Immerse slides into staining dish containing Antigen Retrieval Solution.

 2.2.2. Place covered staining dish into the rice cooker. Add 120 ml of dH2O.

 2.2.3. When cook is turned to warm (about 20 to 30 min), unplug the cooker and remove the staining dish to the bench top.

 2.2.4. Allow to cool down, without cover, for 20 min.

 2.3. Staining

 2.3.1. Wash slides with TBST for 5 min on a shaker.

 2.3.2. Inactivate endogenous peroxidase by covering tissue with 3% hydrogen peroxide for 10 min.

 2.3.3. Wash slides three times with TBST (3 min each on a shaker).

 2.3.4. Block slides with the blocking solution for 1 hour.

 2.3.5. Dilute primary antibody in the blocking buffer per recommendation on the data sheet.

 2.3.6. Apply primary antibody to each section and incubate overnight in the humidified chamber (4C).

 2.3.7. Wash slides three times with TBST (3 min each on a shaker).

 2.3.8. Apply to each section secondary HRP-conjugated anti-rabbit antibody diluted in the blocking solution per manufacturers recommendation; incubate for 1 hour at room temperature.

 2.3.9. Wash slides three times with TBST (3 min each on a shaker).

 2.3.10. Add freshly prepared DAB substrate to the sections.

 2.3.11. Incubate tissue sections with the substrate at room temperature until suitable staining develops (generally 2 to 5 min).

 2.3.12. Rinse sections with water.

 2.3.13. Counterstain with Hematoxylin.

 2.3.14. Rinse sections with water.

 2.3.15. Dehydrate samples using two rinses with 100% Ethanol (20 dips per rinse) followed by two rinses with Xylene (30 dips per rinse).

 2.3.16. Mount coverslips on slides using Permount medium.

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
novus@novusbio.com

Novus Biologicals Canada
461 North Service Road West, Unit B37
Oakville, ON L6M 2V5
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada@novusbio.com

Novus Biologicals Europe
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: technical@novusbio.com
Orders: orders@novusbio.com
General: novus@novusbio.com

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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