abcam

Product datasheet

Anti-Actin antibody [IGX3831H] ab213251

Recombinant

1 References 4 Images

Overview

Product name	Anti-Actin antibody [IGX3831H]
Description	Human monoclonal [IGX3831H] to Actin
Host species	Human
Tested applications	**Suitable for:** WB, ICC/IF
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Recombinant fragment within Human Actin aa 150-400. The exact sequence is proprietary. Database link: **P68133**
Positive control	ICC/IF: HeLa, NIH3T3 cells WB: Human and mouse colon, HeLa, Jurkat, NIH3T3, PANC1, C2C12 whole cell lysates and human skeletal muscle.
General notes	This product was made using **synthetic libraries and phage display technology**. This antibody is a recombinant antibody. Human monoclonal antibody.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 0.05% BSA, 40% Glycerol (glycerin, glycerine)
Purity	Protein A purified
Clonality	Monoclonal
Clone number	IGX3831H
Isotype	IgG1

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab213251 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 5 µg/ml. Detects a band of approximately 42 kDa (predicted molecular weight: 42 kDa).
ICC/IF		Use a concentration of 5 µg/ml. This product gave a positive signal in HeLa cells and NIH3T3 fixed with 4% formaldehyde

Target

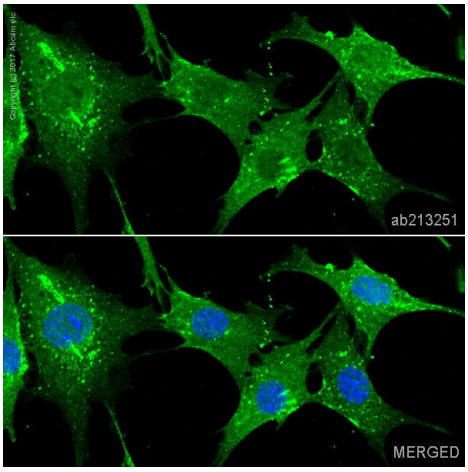
Function Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells.

Involvement in disease Defects in ACTA1 are the cause of nemaline myopathy type 3 (NEM3) [MIM:161800]. A form of nemaline myopathy. Nemaline myopathies are muscular disorders characterized by muscle weakness of varying severity and onset, and abnormal thread-or rod-like structures in muscle fibers on histologic examination. The phenotype at histological level is variable. Some patients present areas devoid of oxidative activity containg (cores) within myofibers. Core lesions are unstructured and poorly circumscribed.
Defects in ACTA1 are a cause of myopathy congenital with excess of thin myofilaments (MPCETM) [MIM:161800]. A congenital muscular disorder characterized at histological level by areas of sarcoplasm devoid of normal myofibrils and mitochondria, and replaced with dense masses of thin filaments. Central cores, rods, ragged red fibers, and necrosis are absent.
Defects in ACTA1 are a cause of congenital myopathy with fiber-type disproportion (CFTD) [MIM:255310]; also known as congenital fiber-type disproportion myopathy (CFTDM). CFTD is a genetically heterogeneous disorder in which there is relative hypotrophy of type 1 muscle fibers compared to type 2 fibers on skeletal muscle biopsy. However, these findings are not specific and can be found in many different myopathic and neuropathic conditions.

Sequence similarities Belongs to the actin family.

Cellular localization Cytoplasm > cytoskeleton.

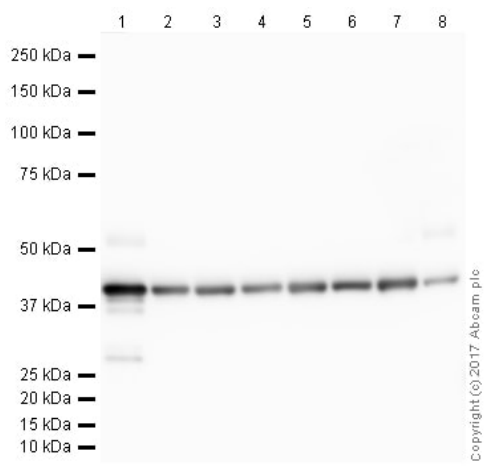
Images



Immunocytochemistry/ Immunofluorescence - Anti-Actin antibody [IGX3831H] (ab213251)

Ab213251 staining Actin in NIH3T3 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab213251 at a 5µg/ml concentration, then detected with a goat anti-human (Alexa Fluor® 488) secondary antibody at a 1/2000 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Western blot - Anti-Actin antibody [IGX3831H] (ab213251)

All lanes : Anti-Actin [IGX3831H] at 1 µg/ml

Lane 1 : Human colon tissue lysate
Lane 2 : Mouse colon tissue lysate
Lane 3 : HeLa whole cell lysate
Lane 4 : Jurkat whole cell lysate
Lane 5 : NIH3T3 whole cell lysate
Lane 6 : PANC1 whole cell lysate
Lane 7 : C2C12 whole cell lysate
Lane 8 : Human skeletal muscle tissue lysate

Lysates/proteins at 10 µg per lane.

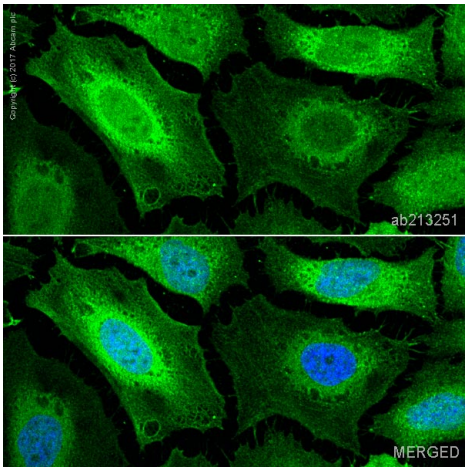
Secondary
All lanes : HRP conjugated Goat Anti-Human IgG (H+L) at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 42 kDa

Exposure time: 1 minute

This blot was produced using a 4-12% Bis-tris gel under the MOPS buffer system. The gel was run at 200V for 50 minutes before being transferred onto a Nitrocellulose membrane at 30V for 70 minutes. The membrane was then blocked for an hour using 3% milk before being incubated with ab213251 overnight at 4°C. Antibody binding was visualised using ECL development solution **ab133406**.



Immunocytochemistry/ Immunofluorescence - Anti-Actin antibody [IGX3831H] (ab213251)

Ab213251 staining Actin in HeLa cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab213251 at a 5µg/ml concentration, then detected with a goat anti-human (Alexa Fluor® 488) secondary antibody at a 1/2000 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

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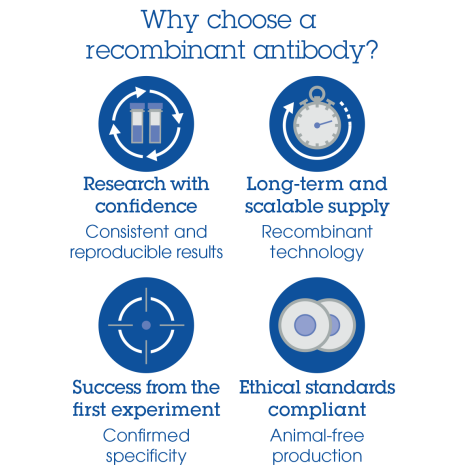

Anti-Actin antibody [IGX3831H] (ab213251)

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