

## Product datasheet

# Anti-beta Actin antibody [EPR21242] ab241153

KO VALIDATED Recombinant

4 Images

### Overview

<b>Product name</b>	Anti-beta Actin antibody [EPR21242]
<b>Description</b>	Rabbit monoclonal [EPR21242] to beta Actin
<b>Host species</b>	Rabbit
<b>Specificity</b>	In-house testing showed ab241153 to react with gamma actin in western blot.
<b>Tested applications</b>	<b>Suitable for:</b> WB, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	ICC/IF: Methanol-fixed HeLa and NIH3T3 cells. WB: HAP1, MEF1 and NIH3T3 whole cell lysates
<b>General notes</b>	This product was made using <b>synthetic libraries and phage display technology</b> .  This antibody is a recombinant chimeric antibody. Rabbit chimeric monoclonal antibody (Human Fab/ Rabbit Fc).

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	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.
<b>Storage buffer</b>	Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR21242
<b>Isotype</b>	IgG1

### Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab241153 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 µg/ml. Predicted molecular weight: 42 kDa.
ICC/IF		Use at an assay dependent concentration.

## 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 ACTB are a cause of dystonia juvenile-onset (DYTJ) [MIM:607371]. DYTJ is a form of dystonia with juvenile onset. Dystonia is defined by the presence of sustained involuntary muscle contraction, often leading to abnormal postures. DYTJ patients manifest progressive, generalized, dopa-unresponsive dystonia, developmental malformations and sensory hearing loss.

### Sequence similarities

Belongs to the actin family.

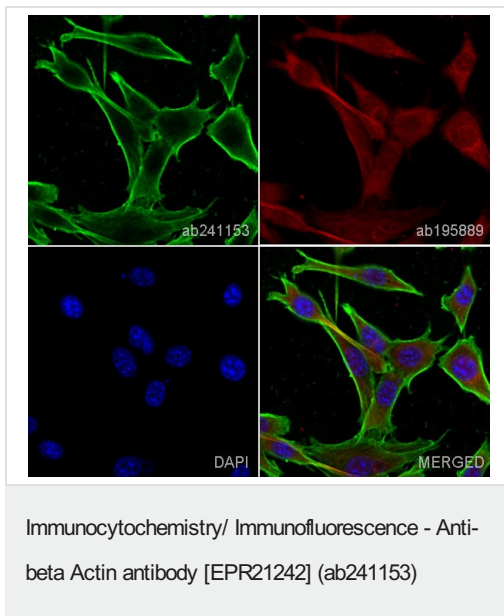
### Post-translational modifications

ISGylated.

### Cellular localization

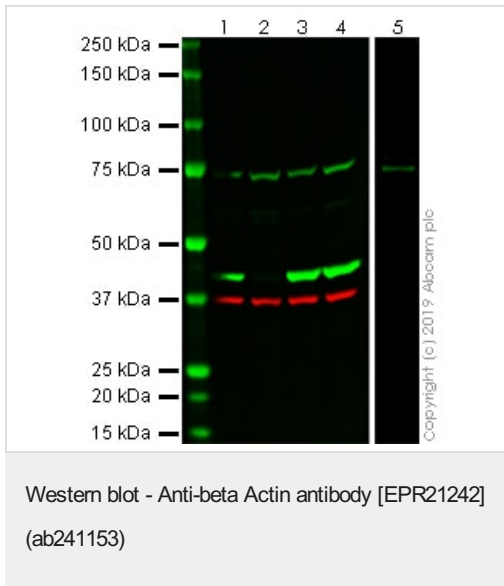
Cytoplasm > cytoskeleton. Localized in cytoplasmic mRNP granules containing untranslated mRNAs.

## Images



**ab213243** staining beta-Actin in NIH3T3 cells. The cells were fixed with 100% methanol (5 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 ab241153 at 0.5ug/ml then detected with an Alexa Fluor<sup>®</sup> 488 goat anti-rabbit secondary antibody (**ab150081**) at a 1/1000 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue), and **ab195889**, Mouse monoclonal to alpha Tubulin (Alexa Fluor<sup>®</sup> 594), at a 1/250 dilution (shown in red).

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



**All lanes :**

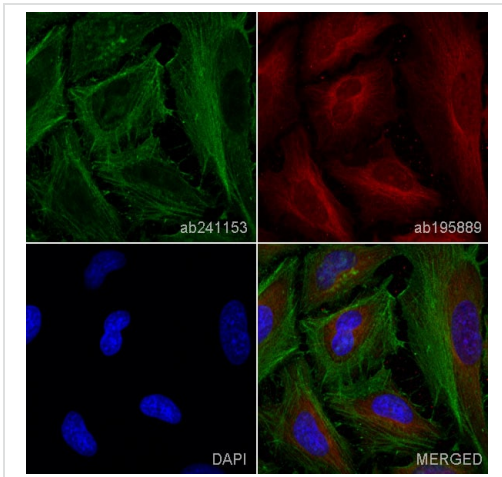
- Lane 1 :** HAP1 whole cell lysate at 20 µg
- Lane 2 :** HAP1 ACTNB whole cell lysate at 20 µg
- Lane 3 :** NIH3T3 whole cell lysate at 20 µg
- Lane 4 :** MEF whole cell lysate at 20 µg
- Lane 5 :** Recombinant Human gamma Actin protein ([ab157841](#))

Performed under reducing conditions.

**Predicted band size:** 42 kDa

ab241153 was shown to react with ACTNB (beta actin) when tested against HAP1 wild-type and HAP1 ACTNB (beta actin) knockout cells. ACTNB wild-type and knockout samples were subjected to SDS-PAGE and incubated with [ab231153](#). Incomplete reduction of signal was seen in the ACTNB (beta actin) knockout samples at beta actin's expected molecular weight. SDS-PAGE of gamma actin recombinant protein and incubation with ab241153 showed cross-reactivity to gamma actin.

ab241153 and [ab8245](#) (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at a 1µg/ml and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed ([ab216773](#)) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed ([ab216776](#)) secondary antibodies at 1/20000 dilution for 1 hour at room temperature before imaging.







Immunocytochemistry/ Immunofluorescence - Anti-beta Actin antibody [EPR21242] (ab241153)

**ab213243** staining beta-Actin in HeLa cells. The cells were fixed with 100% methanol (5 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 ab241153 at 0.01ug/ml then detected with an Alexa Fluor® 488 goat anti-rabbit secondary antibody (**ab150081**) at a 1/1000 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue), and **ab195889**, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at a 1/250 dilution (shown in red).

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

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-beta Actin antibody [EPR21242] (ab241153)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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