


Product datasheet

Anti-beta Actin antibody [EPR21241] ab213262

KO **VALIDATED** Recombinant

★★★★★ [2 Abreviews](#) [7 References](#) [4 Images](#)

Overview

Product name	Anti-beta Actin antibody [EPR21241]
Description	Rabbit monoclonal [EPR21241] to beta Actin
Host species	Rabbit
Specificity	In-house testing showed ab213262 to react with gamma actin in western blot.
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Cow, Dog, Pig 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	ICC/IF: Methanol-fixed HeLa and NIH3T3 cells. WB: HAP1, MEF1 and NIH3T3 cells
General notes	<p>This product was made using <u>synthetic libraries and phage display technology</u>.</p> <p>This antibody is a recombinant chimeric antibody. Rabbit chimeric monoclonal antibody (Human Fab/ Rabbit Fc).</p> <p>If this antibody is used as a loading control in WB and if the signal of the gamma actin is close to the protein of interest to be detected, we recommend cutting the membrane between the expected signals of beta actin and gamma actin and to stain the two parts containing the loading control and the protein of interest separately.</p>

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	Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21241
Isotype	IgG1

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab213262 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	★★★★★ (2)	Use a concentration of 1 µg/ml. Predicted molecular weight: 42 kDa.
ICC/IF		Use a concentration of 0.05 - 0.5 µg/ml.

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.

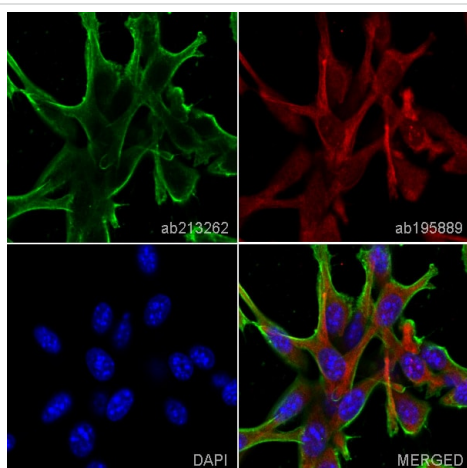
Post-translational modifications

ISGylated.

Cellular localization

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

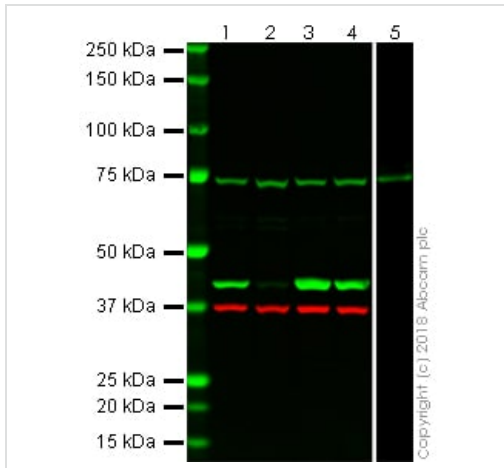
Images



Immunocytochemistry/ Immunofluorescence - Anti-beta Actin antibody [EPR21241] (ab213262)

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 ab213262 at 0.5ug/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).



Western blot - Anti-beta Actin antibody [EPR21241]
(ab213262)

All lanes :

Lane 1 : HAP1 whole cell lysate at 20 µg

Lane 2 : HAP1 ACTNB knockout whole cell lysate at 20 µg

Lane 3 : MEF1 whole cell lysate at 20 µg

Lane 4 : NIH3T3 whole cell lysate at 20 µg

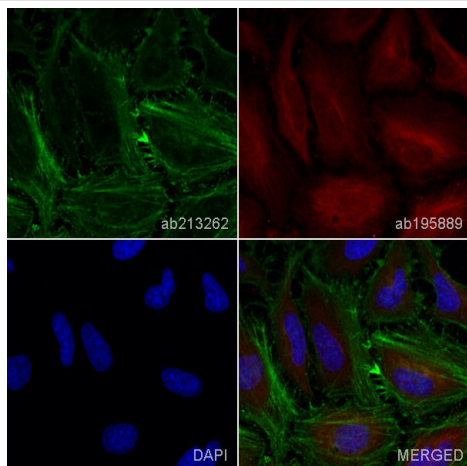
Lane 5 : Recombinant Human gamma Actin protein ([ab157841](#)) at 0.1 µg

Performed under reducing conditions.

Predicted band size: 42 kDa

ab213262 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 ab213262. 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 ab213262 showed cross-reactivity to gamma actin.

ab213262 and [ab8245](#) (Mouse anti-GAPDH loading control) were incubated overnight at 4°C at a 1 µg/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.

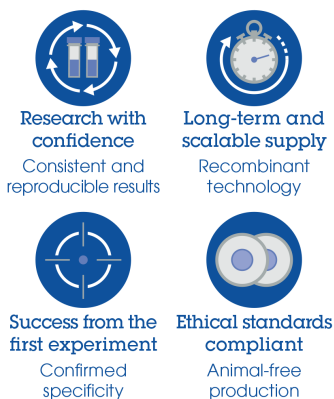


Immunocytochemistry/ Immunofluorescence - Anti-beta Actin antibody [EPR21241] (ab213262)

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 ab213262 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?



Anti-beta Actin antibody [EPR21241] (ab213262)

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

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