

Product datasheet

Anti-beta Actin antibody [mAbcam 8224] - BSA and Azide free ab178787

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Overview

Product name	Anti-beta Actin antibody [mAbcam 8224] - BSA and Azide free
Description	Mouse monoclonal [mAbcam 8224] to beta Actin - BSA and Azide free
Host species	Mouse
Specificity	Recognises a single band at 42kD representing beta Actin. The immunogen used for this product shares 77% homology with Gamma actin/actin cytoplasmic 2. Cross-reactivity with this protein has not been confirmed experimentally.
Tested applications	Suitable for: ICC/IF, IHC-P, WB Unsuitable for: Flow Cyt (Intra)
Species reactivity	Reacts with: Mouse, Rat, Human, Xenopus laevis, Drosophila melanogaster, Schizosaccharomyces pombe Predicted to work with: Rabbit, Chicken, Cow, Cat, Dog, Pig, Chinese hamster, Other species 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers. (Peptide available as ab13772)
Positive control	IHC-P: Human colon tissue. ICC/IF: HeLa cells
General notes	Ab178787 is a PBS Only version of ab8224 . This clone works well as a loading control for Xenopus, Drosophila, S. cerevisiae and S.pombe. We recommend using ab8224 instead of ab8226 for these species. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form Liquid

Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	Constituent: PBS
Carrier free	Yes
Purity	Protein G purified
Clonality	Monoclonal
Clone number	mAbcam 8224
Myeloma	Sp2/0-Ag14
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab178787 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
ICC/IF		Use a concentration of 1 µg/ml.
IHC-P		1/1000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 42 kDa (predicted molecular weight: 42 kDa). Can be blocked with Human beta Actin peptide (ab13772) . This antibody has been designed for use as a loading control and is ideal for this purpose. Block membrane for 1 hr in 5%BSA. Incubate antibody in TBST for one hour or more.

Application notes Is unsuitable for Flow Cyt (Intra).

Target

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

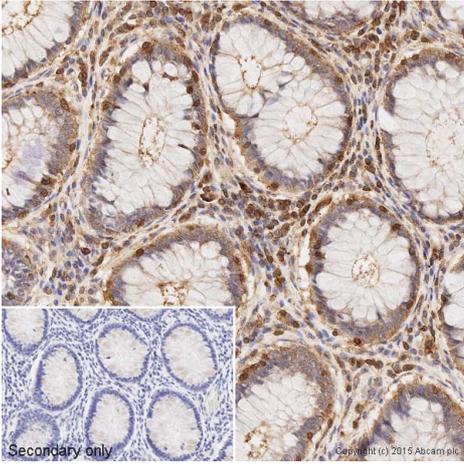
Involvement in disease Defects in ACTB are a cause of dystonia juvenile-onset (DYTJ) [MIM:607371]. DYTJ is a form of dystonia with juvenile onset. Dystonia is defined by the presence of sustained involuntary muscle contraction, often leading to abnormal postures. DYTJ patients manifest progressive, generalized, 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



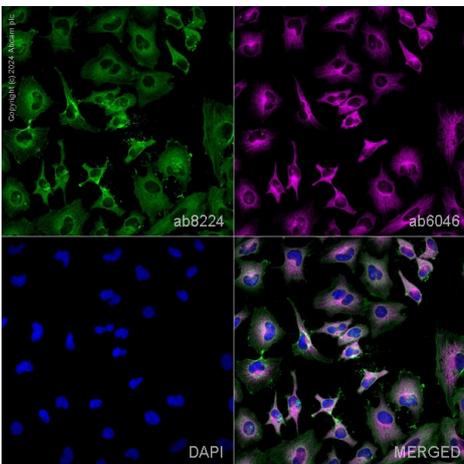
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Actin antibody [mAbcam 8224] - BSA and Azide free (ab178787)

IHC image of **ab8224** staining beta Actin in human colon formalin fixed paraffin embedded tissue sections*, performed on a Leica Bond. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with **ab8224**, 1µg/ml working concentration, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. No primary antibody was used in the secondary only control (shown on the inset).

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

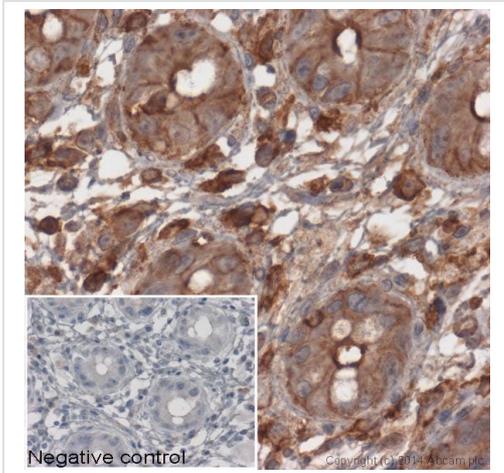
*Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

This data was developed using the same antibody clone in a different buffer formulation containing PBS, L-arginine and sodium azide (**ab8224**).



Immunocytochemistry/ Immunofluorescence - Anti-beta Actin antibody [mAbcam 8224] - BSA and Azide free (ab178787)

This data was developed using the same antibody clone in a different buffer formulation containing BSA and sodium azide (**ab8224**). **ab8224** staining beta Actin in HeLa cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% PBS-Tween 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 **ab8224** at 1µg/ml and **ab6046**, Rabbit polyclonal to beta Tubulin - Loading Control. Cells were then incubated with **ab150117**, Goat polyclonal Secondary Antibody to Mouse IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (shown in green) and **ab150080**, Goat polyclonal Secondary Antibody to Rabbit IgG - H&L (Alexa Fluor® 594) at 1/1000 dilution (shown in pseudocolour magenta). Nuclear DNA was labelled with DAPI (shown in blue). Image was acquired with a high-content analyser (Operetta CLS, Perkin Elmer) and a maximum intensity projection of confocal sections is shown.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-beta Actin antibody [mAbcam 8224] - BSA and Azide free (ab178787)

IHC image of beta actin staining in human colon formalin fixed paraffin embedded tissue section*. The section was pre-treated using pressure cooker heat mediated antigen retrieval with sodium citrate buffer (pH6) for 30mins. The section was incubated with **ab8224**, 3µg/ml overnight at +4°C. A goat **anti-mouse HRP**-conjugated secondary antibody (**ab6789**, 1/2000 dilution) was used for 1hr at room temperature. The section was counterstained with haematoxylin and mounted with DPX.

The inset negative control image is secondary-only at 1/500 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, L-arginine and sodium azide (**ab8224**).

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