abcam

ab123034

Anti-gamma Actin antibody [2A3]

Anti-gamma Actin antibody [2A3] (ab123034) is a mouse monoclonal antibody detecting gamma Actin in **Western Blot, Flow Cytometry, IHC-P, IHC-Fr, ICC/IF, ELISA**. Suitable for **Chicken, Human, Mouse, Pig, Rabbit, Rat, Zebrafish**.

- Over 20 publications

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human ACTG1 aa 1-50 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P63261
Clone number	2A3
Purification technique	Affinity purification Protein G
Specificity	This antibody does not cross react with other actin isoforms. The epitope recognized by ab123034 is highly conserved and the antibody is therefore expected to react with many other species. This antibody is highly specific for gamma-cytoplasmic actin (γ-actin 1; encoded by ACTG1). It does not cross-react with the gamma-actin isoform expressed in the enteric smooth muscle tissues (γ-actin 2; encoded by ACTG2).
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Pig
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Zebrafish
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Chicken
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Rabbit
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

ELISA

Expected

Species	Mouse, Rat, Pig, Zebrafish, Chicken, Human, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Expected

Species	Mouse, Rat, Pig, Zebrafish, Chicken, Human, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

Species	Pig
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Chicken, Rat, Zebrafish, Mouse, Rabbit
Dilution info	-
Notes	-

IHC-Fr

Expected

Species	Mouse, Rat, Pig, Zebrafish, Chicken, Human, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Pig, Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat, Pig, Zebrafish, Chicken, Human, Rabbit
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information ACTG1

Function Actins are highly conserved proteins that are involved in various types of cell motility and are ubiquitously expressed in all eukaryotic cells. May play a role in the repair of noise-induced stereocilia gaps thereby maintains hearing sensitivity following loud noise damage (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-gamma Actin antibody [2A3] (ab123034) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-P), Immunohistochemistry (IHC-Fr), Immunocytochemistry/immunofluorescence (ICC/IF), ELISA in Chicken, Human, Mouse, Pig, Rabbit, Rat, Zebrafish samples.

What is the molecular weight of gamma Actin?
Anti-gamma Actin [2A3] (ab123034) specifically detects a band for gamma Actin (UniProt: P63261) at a molecular weight of 42kDa.

Trusted by the scientific community
Anti-gamma Actin [2A3] (ab123034) was first used in a scientific publication in 2011 and has been cited over 20 times in peer-reviewed journals.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Gamma actin also known as actin gamma 1 and actin kDa is an essential actin protein found in the cytoskeleton. It is expressed widely in various tissues including muscle and non-muscle cells. This protein has a molecular mass of approximately 42 kDa. Gamma actin plays a mechanical role in maintaining cellular shape and facilitating cell motility by polymerizing into filamentous structures known as F-actin. It has alternate names such as 2a-3' and actin green in some contexts.
Biological function summary	Gamma actin contributes significantly to the structure of the cytoskeleton affecting cell shape and function. It forms part of actin filament complexes that provide tension and support to the cell. In both muscle and non-muscle cells gamma actin interacts with other actin isoforms to ensure filament stability and elasticity. These interactions are important for processes like cell division signal transduction and cellular transport.
Pathways	Gamma actin is involved in pathways related to cell motility and division. This protein is integral to the actin cytoskeleton pathway and has connections with proteins such as profilin and cofilin which regulate actin filament dynamics. Additionally it plays roles in signal transduction pathways that control cellular responses to external signals working alongside proteins like the Rho GTPases.
Associated diseases and disorders	Gamma actin has been linked to conditions such as deafness and certain types of cancer. Mutations in the ACTG1 gene encoding gamma actin have been associated with hereditary hearing loss. In cancer changes in gamma actin expression can affect cell migration and invasion contributing to tumor progression. The protein's interaction with other actins and related proteins like actin-binding proteins makes it a critical factor in the molecular mechanisms underlying these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

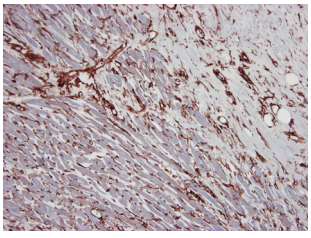
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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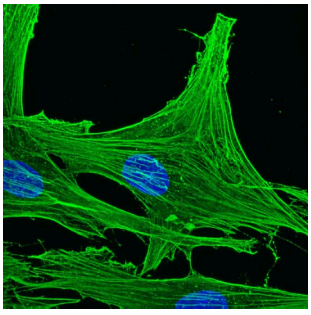
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Actin antibody [2A3] (ab123034)

Gamma Actin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-gamma Actin antibody

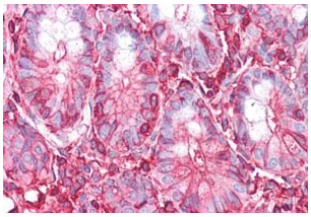
Immunohistochemical analysis of paraffin embedded human heart tissue immunostained for gamma cytoplasmic actin using ab123034 at 1/100 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-gamma Actin antibody [2A3] (ab123034)

Gamma Actin Immunocytochemistry/ Immunofluorescence staining using mouse Anti-gamma Actin antibody

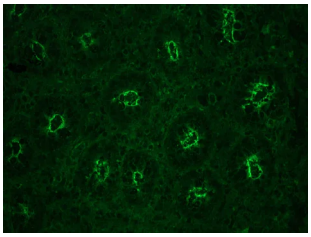
Human dermal fibroblasts stained for gamma Actin (green) using ab123034 at 1/500 dilution in ICC/IF.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Actin antibody [2A3] (ab123034)

Gamma Actin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-gamma Actin antibody

Immunohistochemical analysis of paraffin embedded Human small intestine tissue labelled with Anti-gamma Actin antibody [2A3] at 5 µg/ml



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Actin antibody [2A3] (ab123034)

Gamma Actin Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-gamma Actin antibody

ab123034 (1:1000 dilution) stainign gamma Actin in the epithelial villi and smooth muscle cells in swine colon.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.