abcam

ab194952

Anti-gamma Actin antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human ACTG1 aa 150-250 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P63261
Purification technique	Precipitation Ammonium Sulphate
Specificity	This antibody has not been tested experimentally against other actin forms and might therefore cross-react with other actin proteins.
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/200
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/10 - 1/50
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

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 duration	1-2 weeks

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

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

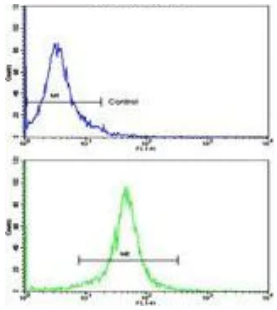
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

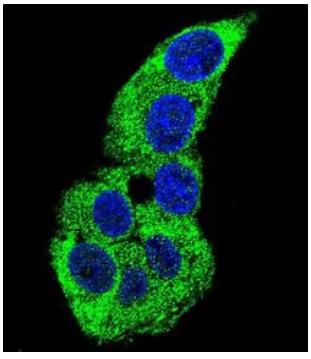
4 product images



Flow Cytometry (Intracellular) - Anti-gamma Actin antibody (ab194952)

Gamma Actin Flow Cytometry (Intracellular) staining using rabbit Anti-gamma Actin antibody

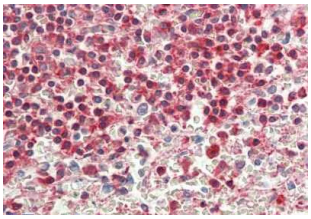
Intracellular Flow Cytometry of K562 cells using ab194952 at 1/10 (Center) (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Immunocytochemistry/ Immunofluorescence - Anti-gamma Actin antibody (ab194952)

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

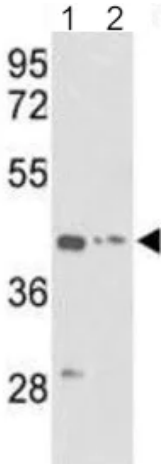
Immunofluorescent analysis of HepG2 cells labeling gamma Actin with ab194952 at 1/10 followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green) and DAPI staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-gamma Actin antibody (ab194952)

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

Immunohistochemical analysis of formalin-fixed, paraffin-embedded Human spleen tissue labeling gamma Actin with ab194952 at 1/100.



Western blot - Anti-gamma Actin antibody (ab194952)

All lanes:
Western blot - Anti-gamma Actin antibody (ab194952) at 1/1000 dilution

Lane 1:
K562 cell line lysate at 35 µg

Lane 2:
HepG2 cell line lysate at 35 µg

Predicted band size: 42 kDa

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