

## Datasheet: MCA5776GA

<b>Description:</b>	MOUSE ANTI HUMAN ACTIN GAMMA
<b>Specificity:</b>	ACTIN GAMMA
<b>Other names:</b>	ACTG1
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	2A3
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	0.1 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin	▪			
ELISA			▪	
Western Blotting	▪			1/100 - 1/1000
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

### Target Species

Human

### Species Cross Reactivity

Reacts with: Mouse

Based on sequence similarity, is expected to react with: Mammals

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

### Product Form

Purified IgG - liquid

### Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture

supernatant

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<b>Buffer Solution</b>	Phosphate buffered saline
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<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
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<b>Carrier Free</b>	Yes
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<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
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<b>Immunogen</b>	Synthetic peptide corresponding to the N-terminal nonapeptide of gamma-cytoplasmic actin, coupled to KLH.
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**External Database Links**

**UniProt:**

[P63261](#)    [Related reagents](#)

**Entrez Gene:**

[71](#)    ACTG1    [Related reagents](#)

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<b>Synonyms</b>	ACTB, ACTG
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<b>RRID</b>	AB_2571583
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<b>Specificity</b>	<b>Mouse anti Human actin gamma antibody, clone 2A3</b> recognizes cytoplasmic actin gamma (known also as ACTG and Gamma Actin), a 41.8 kDa cytoskeletal protein.
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Actins are highly conserved proteins that are involved in cell motility, structure and integrity and are ubiquitously expressed in all eukaryotic cells. Six different isoforms of actin have been identified ([Vandekerckhove and Weber 1978](#)) .

Mouse anti Human actin gamma antibody, clone 2A3 is highly specific for actin gamma and does not react with other actin isoforms ([Dugina et al. 2009](#)).

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**References**

1. Dugina, V. *et al.* (2009) Beta and gamma-cytoplasmic actins display distinct distribution and functional diversity. [J Cell Sci. 122: 2980-8.](#)
2. Brockmann, C. *et al.* (2011) Beta- and gamma-cytoplasmic actins are required for meiosis in mouse oocytes. [Biol Reprod. 85: 1025-39.](#)
3. Miazza, V. *et al.* (2011) Sendai virus induced cytoplasmic actin remodeling correlates with efficient virus particle production. [Virology. 410: 7-16.](#)
4. Baranwal, S. *et al.* (2012) Nonredundant roles of cytoplasmic  $\beta$ - and  $\gamma$ -actin isoforms in regulation of epithelial apical junctions. [Mol Biol Cell. 23: 3542-53.](#)
5. Dugina, V. *et al.* (2015) Tumor promotion by  $\gamma$  and suppression by  $\beta$  non-muscle actin isoforms. [Oncotarget. 6 \(16\): 14556-71.](#)
6. Simiczjew A *et al.* (2015) Active invadopodia of mesenchymally migrating cancer cells contain both  $\beta$  and  $\gamma$  cytoplasmic actin isoforms. [Exp Cell Res. pii: S0014-4827\(15\)30146-4.](#)

7. Simiczyjew, A. *et al.* (2017) Involvement of  $\beta$ - and  $\gamma$ -actin isoforms in actin cytoskeleton organization and migration abilities of bleb-forming human colon cancer cells. [PLoS One. 12 \(3\): e0173709.](#)
8. Chaponnier, C. & Gabbiani, G. (2016) Monoclonal antibodies against muscle actin isoforms: epitope identification and analysis of isoform expression by immunoblot and immunostaining in normal and regenerating skeletal muscle. [F1000Res. 5: 416.](#)
9. Chen, A. *et al.* (2017) Cytokinesis requires localized  $\beta$ -actin filament production by an actin isoform specific nucleator. [Nat Commun. 8 \(1\): 1530.](#)

<b>Storage</b>	Store at +4°C or at -20°C if preferred. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	<a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR12...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR8...)	<a href="#">DyLight@800</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Rabbit Anti Mouse IgG (STAR9...)	<a href="#">FITC</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (H/L) (STAR117...)	<a href="#">Alk. Phos.</a> , <a href="#">DyLight@488</a> , <a href="#">DyLight@680</a> , <a href="#">DyLight@800</a> , <a href="#">FITC</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>

### Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL \(MCA691\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)  
'M368379:200529'

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