

Datasheet: MCA5776GA

BATCH NUMBER 159389

Description:	MOUSE ANTI HUMAN ACTIN GAMMA
Specificity:	ACTIN GAMMA
Other names:	ACTG1
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	2A3
Isotype:	IgG2b
Quantity:	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.

	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	<p>Reacts with: Mouse</p> <p>Based on sequence similarity, is expected to react with: Mammals</p> <p>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.</p>
Product Form	Purified IgG - liquid

Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Synthetic peptide corresponding to the N-terminal nonapeptide of gamma-cytoplasmic actin, coupled to KLH.
External Database Links	<p>UniProt: P63261 Related reagents</p> <p>Entrez Gene: 71 ACTG1 Related reagents</p>
Synonyms	ACTB, ACTG
RRID	AB_2571583
Specificity	<p>Mouse anti Human actin gamma antibody, clone 2A3 recognizes cytoplasmic actin gamma (known also as ACTG and Gamma Actin), a 41.8 kDa cytoskeletal protein.</p> <p>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) .</p> <p>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).</p>
References	<ol style="list-style-type: none"> Dugina, V. <i>et al.</i> (2009) Beta and gamma-cytoplasmic actins display distinct distribution and functional diversity. J Cell Sci. 122: 2980-8. Brockmann, C. <i>et al.</i> (2011) Beta- and gamma-cytoplasmic actins are required for meiosis in mouse oocytes. Biol Reprod. 85: 1025-39. Miazza, V. <i>et al.</i> (2011) Sendai virus induced cytoplasmic actin remodeling correlates with efficient virus particle production. Virology. 410: 7-16. Baranwal, S. <i>et al.</i> (2012) Nonredundant roles of cytoplasmic β- and γ-actin isoforms in regulation of epithelial apical junctions. Mol Biol Cell. 23: 3542-53. Dugina, V. <i>et al.</i> (2015) Tumor promotion by γ and suppression by β non-muscle actin isoforms. Oncotarget. 6 (16): 14556-71. Simiczyjew A <i>et al.</i> (2015) Active invadopodia of mesenchymally migrating cancer cells contain both β and γ cytoplasmic actin isoforms. Exp Cell Res. pii:

[S0014-4827\(15\)30146-4.](#)

7. Simiczyjew, A. *et al.* (2017) Involvement of β - and γ -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 β -actin filament production by an actin isoform specific nucleator. [Nat Commun. 8 \(1\): 1530.](#)

10. Dugina, V. *et al.* (2021) Impaired Expression of Cytoplasmic Actins Leads to Chromosomal Instability of MDA-MB-231 Basal-Like Mammary Gland Cancer Cell Line. [Molecules. 26\(8\):2151.](#)

Storage This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA5776GA>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...) [RPE](#)
Goat Anti Mouse IgG IgA IgM (STAR87...) [HRP](#)
Goat Anti Mouse IgG (STAR76...) [RPE](#)
Goat Anti Mouse IgG (STAR70...) [FITC](#)
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight@488](#), [DyLight@550](#),
[DyLight@650](#), [DyLight@680](#), [DyLight@800](#),
[FITC](#), [HRP](#)
Goat Anti Mouse IgG (STAR77...) [HRP](#)
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

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)

Printed on 08 May 2024