

Datasheet: MCA5776GA

BATCH NUMBER 0415

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| 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.

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| 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 |

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| 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. Simiczjew 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.](#)

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| Storage | 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. |
| 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

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|---|---|
| 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 |

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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)
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