

Datasheet: MCA4740

**BATCH NUMBER 166201**

<b>Description:</b>	MOUSE ANTI HUMAN GAPDH
<b>Specificity:</b>	GAPDH
<b>Other names:</b>	GLYCERALDEHYDE-3-PHOSPHATE DEHYDROGENASE
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	4G5
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.2 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	▪			
Immunoprecipitation	▪			
Western Blotting	▪			
Immunofluorescence	▪			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Bovine, Pig, Goat, Cat, Rat, Mouse, Dog, Rabbit, Fish</p> <p><b>N.B.</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>
<b>Product Form</b>	Purified IgG - liquid

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from ascites
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	<0.1% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0mg/ml
<b>Immunogen</b>	Human cardiac muscle GAPDH.
<b>External Database Links</b>	<p><b>UniProt:</b></p> <p><a href="#">P46406</a>      <a href="#">Related reagents</a></p> <p><a href="#">P04406</a>      <a href="#">Related reagents</a></p> <p><a href="#">P04797</a>      <a href="#">Related reagents</a></p> <p><a href="#">P16858</a>      <a href="#">Related reagents</a></p> <p><a href="#">P00355</a>      <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">100009074</a>    GAPDH    <a href="#">Related reagents</a></p> <p><a href="#">2597</a>            GAPDH    <a href="#">Related reagents</a></p> <p><a href="#">396823</a>        GAPDH    <a href="#">Related reagents</a></p> <p><a href="#">14433</a>          Gapdh     <a href="#">Related reagents</a></p> <p><a href="#">24383</a>          Gapdh     <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Gapd, GAPD
<b>RRID</b>	AB_2107457
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the Sp2/0 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human GAPDH antibody, clone 4G5</b> recognizes glyceraldehyde-3-phosphate dehydrogenase (GAPDH), a 36 kDa protein whose main function is to catalyse the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate, in conjunction with inorganic phosphate and nicotinamide adenine dinucleotide (NAD). This reaction is an important energy yielding step in carbohydrate metabolism.</p> <p>GAPDH has also been shown to translocate to the nucleus under a variety of stressors, most of which are associated with oxidative stress, whereby it mediates cell death (Chuang &amp; Ishitani 1996). GAPDH binds to several proteins responsible for neurodegenerative diseases, such as amyloid precursor protein and Huntingtin (<a href="#">Burke et al. 1996</a>).</p>
<b>References</b>	1. Sun, S.Q. <i>et al.</i> (2012) Enhanced T cell immunity by B7-H4 downregulation in nonsmall-cell lung cancer cell lines. <a href="#">J Int Med Res. 40: 497-506.</a>

2. Northrup, E. *et al.* (2012) The ter mutation in the rat Dnd1 gene initiates gonadal teratomas and infertility in both genders. [PLoS One. 7: e38001.](#)
3. DeVallière, C. *et al.* (2015) The pH-sensing receptor OGR1 improves barrier function of epithelial cells and inhibits migration in an acidic environment. [Am J Physiol Gastrointest Liver Physiol. 309 \(6\): G475-90.](#)
4. Shimizu, H. *et al.* (2016) Transgenic mice overexpressing nesfatin/nucleobindin-2 are susceptible to high-fat diet-induced obesity. [Nutr Diabetes. 6: e201.](#)
5. Ellegaard, A.M. *et al.* (2016) Repurposing Cationic Amphiphilic Antihistamines for Cancer Treatment. [EBioMedicine. 9: 130-9.](#)
6. Tirumuru, N. *et al.* (2016) N(6)-methyladenosine of HIV-1 RNA regulates viral infection and HIV-1 Gag protein expression. [Elife.5:e15528.](#)
7. Clark, P.A. *et al.* (2017) Resveratrol targeting of AKT and p53 in glioblastoma and glioblastoma stem-like cells to suppress growth and infiltration. [J Neurosurg. 126 \(5\): 1448-60.](#)
8. Kim, J. *et al.* (2018) MicroRNA-378 is involved in hedgehog-driven epithelial-to-mesenchymal transition in hepatocytes of regenerating liver. [Cell Death Dis. 9 \(7\): 721.](#)
9. Breitzkreuz-Korff, O. *et al.* (2021) M01 as a novel drug enhancer for specifically targeting the blood-brain barrier. [J Control Release. 338: 137-48.](#)
10. Lee, C. *et al.* (2022) Formyl peptide receptor 2 determines sex-specific differences in the progression of nonalcoholic fatty liver disease and steatohepatitis. [Nat Commun. 13 \(1\): 578.](#)

<b>Storage</b>	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.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA4740">https://www.bio-rad-antibodies.com/SDS/MCA4740</a> 10040
<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>
Goat Anti Mouse IgG IgA IgM (STAR87...)	<a href="#">Alk. Phos.</a> , <a href="#">HRP</a>
Goat Anti Mouse IgG (STAR76...)	<a href="#">RPE</a>
Goat Anti Mouse IgG (Fc) (STAR120...)	<a href="#">FITC</a> , <a href="#">HRP</a>
Rabbit Anti Mouse IgG (STAR13...)	<a href="#">HRP</a>
Goat Anti Mouse IgG (STAR70...)	<a href="#">FITC</a>

Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)

Rabbit Anti Mouse IgG (STAR9...) [FITC](#)

## Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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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://bio-rad-antibodies.com/datasheets)

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