

Datasheet: MCA4740

Description:	MOUSE ANTI HUMAN GAPDH
Specificity:	GAPDH
Other names:	GLYCERALDEHYDE-3-PHOSPHATE DEHYDROGENASE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	4G5
Isotype:	IgG1
Quantity:	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.

	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.

Target Species

Human

Species Cross Reactivity

Reacts with: Bovine, Pig, Goat, Cat, Rat, Mouse, Dog, Rabbit, Fish

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 ascites

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	<0.1% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Human cardiac muscle GAPDH.
External Database Links	<p>UniProt:</p> <p>P46406 Related reagents</p> <p>P04406 Related reagents</p> <p>P04797 Related reagents</p> <p>P16858 Related reagents</p> <p>P00355 Related reagents</p> <p>Entrez Gene:</p> <p>100009074 GAPDH Related reagents</p> <p>2597 GAPDH Related reagents</p> <p>396823 GAPDH Related reagents</p> <p>14433 Gapdh Related reagents</p> <p>24383 Gapdh Related reagents</p>
Synonyms	Gapd, GAPD
RRID	AB_2107457
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the Sp2/0 myeloma cell line.
Specificity	<p>Mouse anti Human GAPDH antibody, clone 4G5 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 & Ishitani 1996). GAPDH binds to several proteins responsible for neurodegenerative diseases, such as amyloid precursor protein and Huntingtin (Burke et al. 1996).</p>
References	<ol style="list-style-type: none"> Sun, S.Q. <i>et al.</i> (2012) Enhanced T cell immunity by B7-H4 downregulation in nonsmall-cell lung cancer cell lines. J Int Med Res. 40: 497-506. Northrup, E. <i>et al.</i> (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.](#)

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/MCA4740>
10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
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](#)

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

Recommended Negative Controls

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

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

'M389561:210806'

Printed on 18 Jan 2024

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