

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.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from ascites
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1.0mg/ml

Immunogen Human cardiac muscle GAPDH.

External Database Links

UniProt:

[P46406](#) [Related reagents](#)
[P04406](#) [Related reagents](#)
[P04797](#) [Related reagents](#)
[P16858](#) [Related reagents](#)
[P00355](#) [Related reagents](#)

Entrez Gene:

[100009074](#) GAPDH [Related reagents](#)
[2597](#) GAPDH [Related reagents](#)
[396823](#) GAPDH [Related reagents](#)
[14433](#) Gapdh [Related reagents](#)
[24383](#) Gapdh [Related reagents](#)

Synonyms Gapd, GAPD

Fusion Partners Spleen cells from immunised Balb/c mice were fused with cells of the Sp2/0 myeloma cell line.

Specificity **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.

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](#)).

References

1. Sun, S.Q. *et al.* (2012) Enhanced T cell immunity by B7-H4 downregulation in nonsmall-cell lung cancer cell lines. [J Int Med Res. 40: 497-506.](#)
 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. de Vallière 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. : ajpgi.00408.2014.](#)
 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) N⁶-methyladenosine of HIV-1 RNA regulates viral infection and HIV-1 Gag protein expression. [Elife. Jul 2 pii: e15528. \[Epub ahead of print\]](#)
 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.](#)
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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.

Shelf Life	18 months from date of despatch.
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Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight@488 , DyLight@549 , DyLight@649 , DyLight@680 , DyLight@800 , FITC , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight@800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP

Recommended Negative Controls

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

North & South America	Tel: +1 800 265 7376 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
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